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Metal Work at the Burlington Club.

THE Committee of the Burlington Fine Arts Club have got together such a collection of decorative metal-work as has seldom or never been seen in one room before. What gives additional interest to it is that this is entirely an exhibition of the application of decoration to objects of use; there is nothing that is merely ornamental; everything in the room has been made originally for a practical purpose. Armour figures largely in it; swords also and daggers; keys and lock-plates; caskets and knockers; and there is hardly an object in the room that is not worth attention for artistic design or executive skill—in most instances for both. Another point, to which attention is rightly called in the preface to the catalogue, is that the exhibition is confined to objects into the making of which heat has entered very little, except for annealing and soldering purposes; "everything has been fashioned by carving, filing and chasing from the solid, or piercing and embossing the sheet metal while cold." In a day when iron and steel are so wofully misused for the production of things which exhibit either utility with no attempt at beauty, or ornament devoid of value or meaning, such a collection is not only a source of enjoyment but ought to be exceedingly instructive, if those who are most in want of instruction could be brought to study it. We also meet here with occasional (though rare) æsthetic mistakes, which have likewise their value to the student.

Lock-plates and keys form the first two sections of the collection. Of the lock-plates the French examples are much the finest; the German in comparison are mostly somewhat commonplace in conception, the English are comparatively coarse in execution. The architectural character of most of the French examples is remarkable, and is especially shown in the chest lock No. 6, with its canopy, pinnacles, and figures, and surrounding margin of flamboyant tracery, the latter of the most beautiful and pliant workmanship; and there is nothing in this miniature architectural detail which is out of keeping with the position and use of a lock-plate. Among the German locks No. 12 is noteworthy for its bold and finely-drawn scroll-work. Among the English work in this case the best example is the portable lectern, No. 23, lent by Sir Chas. Robinson. One or two knockers in this case have the fault which characterises most knocker designs, old and new—they do not suggest knockers, the knocking portion having no essential fitness for its function.

The keys in the next case are perhaps the finest portion of the collection; they form quite a poem, and should be studied by the designers of modern ceremonial keys, generally such sad failures. It is true there are one or two mistakes in design, more particularly in the fifteenth-century key, No. 6, which is described in the catalogue as "perhaps the finest French Gothic key in existence," whereby we perceive that the writer of the catalogue dwells more on refinement of execution than on suitability of design; for in this case the handle or "bow" of the key is formed by a miniature model of a Gothic turret, the details very small and delicate, of course making a handle uncomfortable to grasp, and weak in appearance just where strength is requisite. If this came to us as a modern ceremonial key we should condemn it as a bad design, and it is not to be accepted merely because it is old; good taste is not a matter of chronology. The very fine seventeenth-century key No. 18, lent by the same owner (Mr. Currie), is also disfigured, *quâ* key, by the miniature Doric temple with a figure in it, half way up the stem, which is quite out of place and weakens the implement. These, however, are about the only two in the numerous collection to which this kind of exception can be taken. The majority of them may be said to be a collection of masterpieces. There are two or three distinct types. There are the French quasi-classical keys, the bow formed of terminal figures and scroll-work disposed in various ways, all of which have the merit of forming strong-looking and practicable handles as well as fine designs. Most of these are dated as sixteenth century; if this is correct, it is rather curious to notice that the Renaissance feeling in design appears to have seized on the key before it got possession of the lock-plate, as several of the lock-plates which are completely Gothic in style are also assigned to the sixteenth century. Perhaps the finest key of the French Renaissance type is No. 17, with its very wide and boldly designed bow, consisting of two winged chimeras with a term and a mask between them; the student should notice also Mr. Greene's key, No. 22, with three winged terms addorsed, making a bow with a triangular plan—a variation not only effective in appearance but making a very good and strong handle for grasping. The English keys, rather later on an average than the French, are mostly characterised by their flat bows of very elaborate and delicate open work, and with the stems in many cases beautifully and very minutely decorated. Of this class Nos. 56, 57, 62, and 63 are especially fine. The German keys are also of the flat-handled variety with open work, but mostly less delicate and refined than the English examples; No. 75 is perhaps the best. But this whole case of keys (Case B) is a feast of beautiful work, and is worth a visit in itself.

The armour exhibited includes some splendid examples of elaborate work in damascening and other methods of ornamenting metal, but perhaps the two most impressive exhibits in this class are two helmets, one perfectly plain, the other only ornamented by modelling the surface, and by some slight engraving. The first of these is the tilting helmet which forms the central piece in Case D. This is of the time of Henry VII., and is now in the possession of the Rotunda Museum, Woolwich. The interest of this is that it gives such a reality to one's conception of a tilting fight. It is

not so much a mere head-covering as a fortification—a piece of engineering on a small scale, all the lines of which are designed to make the adversary's spear-head glance off, wherever it may strike. A close examination of it shows that the aperture for seeing opens upwards and not frontways, the section being something like this:—

A

At the edge A the front piece is rolled backwards on itself for an inch to give it more strength, and in the event of the spear-point striking above this edge, it would cross the aperture and glance off against the rise of the top of the helmet. How did the wearer see? Evidently his head was kept as far back as possible in the helmet, which is larger than the head, and his eyes would just get a glimpse of his advancing adversary over the edge A. Like the Vauban type of fortifications, like the modern armoured turret, this is an example (on a small scale) of the manner in which the conditions of defence dictate the form of the structure. The other helmet we referred to is at the other end of the room, on the top of Case K,* and is numbered 39. It is a steel helmet of the sixteenth century, opening down the chin, closed in front when in use by a piece forged in a kind of ridge-and-furrow design, and with a rounded headpiece entirely covered with a fluting worked with an accuracy and purity of line which reminds one of Greek art. The heads of the rivets along the base are each made the centre of a delicately engraved six-petalled rose. The general shape, with the front sloping backwards and the very large rounded "occiput," as one may call it, gives a curious suggestion of a barbaric type of head, and has an unpleasant appearance; but as an example of careful design and workmanship, and the reticent but refined use of ornament, it is an artistic masterpiece. This also comes from the Woolwich Museum. On the top of the same case the "skull of a bascinet" (No. 36) is an excellent example of good, plain workmanship and characteristic form.

Among the richly ornamented suits or parts of suits of armour in the room there is quite an art-museum of beautiful and delicate detail. Among these we may direct attention to the suit of armour, No. 6 among the objects not in cases, the whole surface of which is etched and gilt with small arched canopies, "with alternate subjects of the Gorgon's head, the winged thunderbolt, and the trident of Neptune, encircled by two dolphins, producing the effect of a diaper"; we quote the details from the catalogue, for it takes a good while to follow them out, but the general effect is rich and delicate in the extreme, and the manner in which it is produced is well worth study, seeing that it is a kind of ornament that may be applied to any other metal surface just as well as to armour. We may also draw attention to the rondache of bright steel, No. 6 in Case J, with its bands of ornament radiating from the centre, and contrasting so effectively with the bright steel surface of the remainder.

The cases of swords are full of beautiful work, and are almost as interesting from the human as from the artistic point of view. The rapiers and daggers in Case L take us back to the time of those bloodthirsty combats *à outrance* between men armed with a rapier in the right hand and a dagger in the left hand (the latter protected by a cloak wrapped round the arm), which the late Mr. Pettie realised for us in so dramatic a manner in perhaps the most effective picture he ever painted. Yet there is evidence that in their own day such combats were not regarded as brutal at all, but heroic and worthy of a gentleman. What says the worthy Gloucestershire squire, Mr. Higford, of the seventeenth century, in his "Institutions," a book of good advice for his grandson?—

"The use of arms doth much differ in these times. I hear now the single rapier is altogether in use; when I was young the rapier and dagger. And I cannot understand, seeing God hath given a man two hands, why he should not use them both for his defence. The bravest gentlemen of arms which I have seen were Sir Charles Candish, and the now Marquis of Newcastle his son, Sir Kenelm Digby, and Sir Lewis Dives, whom I have seen compose their whole bodies in such a posture that they seemed to be a fort impregnable"*

Thus it will appear that this good old English gentleman regarded the joint use of rapier and dagger as almost of divine institution, the natural result of the fact that "God hath given a man two hands." It is to be hoped, however, that he would not have approved of the brutal-looking notched rapier, No. 17 in Case L, though this is worth attention from an artistic point of view, from the manner in which the notched character of the blade is repeated or symbolised in the details of the hilt. The eighteenth-century small-swords, in Case N, form an interesting contrast with the more formidable weapons just referred to. You could kill your man with them as effectually as with the rapier and dagger, but it was done in the gentlemanly and polished manner befitting a polished age, and with a delicate-looking instrument worn as a personal ornament, and harmonising admirably with the laced ruffles and other characteristics of the costume of the period. One could fancy "Sir Plume" going abroad with a sword such as the English example, No. 2. The two French ones which come next in the numbering are, however, superior to this in delicacy and finish, just as the French polish of the period was superior to the English imitation. In the intermediate case, M, which we have passed over, we should call attention to a splendid horse's bit of Italian sixteenth-century work (17), and also a decoratively treated flat-iron (10), with an ivory handle; the only example of the decorative treatment of this humble utensil which we remember to have seen.

To heighten the artistic effect of the show—for "it is the aim of the club not only to show fine things but also to arrange them in the gallery in such a way that they may be seen to the best possible advantage"—the walls of the room have been completely hung with tapestries extending over the whole period during which the finest steel work was produced, so as to form an artistically and historically appropriate background. Even the Burlington Club, with all its records, has hardly ever assembled such a splendid and remarkable collection of artistic work as that which is now to be seen there.

We may remind our readers that though the exhibition is nominally a private one, both the committee and the individual members of the club are ready to extend their courtesy to all lovers of art who ask for admission.

PROGRESS IN ARCHITECTURE.*

By PROFESSOR AITCHISON, R.A.

THE importance of architecture to a nation is so great that I can hardly dwell too long upon the subject, for the monuments of architecture write the history of the tastes and attainments of the people at the place where and at the time when they were erected more perfectly, more strikingly, and more permanently than it can otherwise be written, and have, too, the inestimable gift of showing the monuments in their original position.

One sees at the epochs when a nation creates one of the masterpieces of the fine arts there is a passion for such creations, as one may say so, in the air, and this affects the nation where they are created, so that all people have a desire to create in that direction.

Each of the masterpieces of the fine arts forms the most cherished treasure of the nation that has produced it, and eventually forms one of the components of the principal treasure of the civilised world; for real wealth is what we can enjoy after all the necessaries of life have been supplied.

One thing at least we can assert: that this overwhelming tendency is by no means now directed towards architecture.

As far as I can make out, there is no antagonism between science and art, and there appears to be no reason why they should not both flourish together, although it was mainly in Greek times that they did, for though they both flourished in Italy at the same time, architectural art was then on the decline, for Galileo was not born till 1564, and did not make his first telescope till 1609, when all the great architects were dead.

I suppose it is a rare occurrence when the bulk of ordinary people do not desire great riches, for with riches whatever can be sold may be bought; but you cannot sell or buy with gold qualities of the mind, body, or will, nor that transcendent gift we call invention. At the present day the nobler class of minds are turned towards the investigation of Nature, which does not require invention, and that profound investigation mostly leaves its devotees poor, partly necessarily (for the law can only protect from theft an invention for a specific purpose), and partly because those whose constant efforts are to gain wisdom do not want to burden themselves with impediments. The more common sort of invention, the mechanical, if the inventor can apply the discovered law greatly for man's material advantage, promises wealth beyond the dreams of avarice.

It is part of our duty as architects to try to induce mankind to keep in active use the admi-

* The case was erroneously lettered "R" at the time of our visit; we presume this will have been corrected. There were two or three mistakes also in the placing of the numbers in some of the cases. In case H, Nos. 6 and 7 were transposed, and in case J the breastplate marked "12" in the catalogue had the number "14" in the case.

* Quoted in an article in the old *Pall Mall Gazette* some five-and-twenty years ago, along with much other curious and characteristic matter from Squire Higford's "Institutions."

* First lecture on architecture delivered by Professor Aitchison to the students of the Royal Academy, on Thursday, February 1. As we have been in the habit for a long time past of printing the whole series of Royal Academy Lectures on Architecture, it may be as well to mention that on this occasion Professor Aitchison, for special reasons, has decided not to publish the remainder of the course.

ration of things beautiful and characteristic which is implanted in us; for it seems to me that the beautiful forms, colours, proportions, and marked character that Nature spreads for us everywhere were created for our purification, solace, and delight. The constant admiration of the beauties of Nature, and the study of the human form, naturally suggested to the artistic and poetic Greeks the adoption and use of these forms, and also a search after the laws that produced these effects, and they used abstractions from natural objects for the adornment of their buildings. The Greeks had observed from the study of the human form the value of simplicity, and what but their admiration of a lovely form made them adopt the shell of the sea-urchin, the echinus, for the main feature in the Doric capital, and the lovely spiral of some sea-shell for the Ionic? though the original form seems to have been suggested by the lotus. It seems to me that the most beautiful creations of Greek genius have given us work for which we may be as thankful as for the beauties of Nature, and they certainly come home to us more strongly. Architecture has created some of the most beautiful and impressive things in the world. The perfection the Greeks attained in this direction is still the admiration and delight of all those who are capable of lofty emotions. A modern philosopher, with rather an inclination to positivism, declared that he did not think perfection was to be attained in this world till he had seen the buildings at Athens.

Greek architecture does not express all we want to express in the nineteenth century, for our knowledge and our cultivation have enormously increased since those days. The lovely Greek mouldings, too, do not tell their tale in this sunless and misty climate; but, in spite of these drawbacks, the best modern buildings we have in England are more or less paraphrases of the best Greek or Greco-Roman architecture when it has been handled by such men of genius as Wilkins, Soane, Cockerell, and Elmes, of whose works examples may be seen at the National Gallery and University College, the Bank of England and Bank Buildings, the Sun Fire Office, the London and Westminster Bank in London, some of the insurance offices at Liverpool, the Taylor and Randolph Buildings at Oxford, and St. George's Hall at Liverpool. We have in the architectural school, as you know, several of the models Wilkins had made for the National Gallery and University College, and you can see the fine taste he had and the elaborate pains he took to get harmonic proportions.

I do not expect now that affluence of genius there was in the days of Pericles at Athens, after the Athenians had been the main factors in defeating the invading Persians both by land and sea; hardly that which existed in the days of the magnificent Hadrian, whose ambition was to be thought a great architect.

Nor can we expect to rival the best Byzantine monuments that resulted from the architectural school started by Constantine two hundred years before; still less the best of the Arab monuments, for the Arabs were what we call a new race, and certainly with a new religion, and of such energy that their all-conquering arms had nearly subdued the earth. Nor can we expect at once to rival the mediæval wonders started by a new race newly introduced to the Saracenic civilisation, who had wrenched Jerusalem, a great and valued possession, from the Saracens, and who were endowed with a wholly new religious fervour. But one would think there was attraction enough in the hopes of immortality and the delight of being able to create to tempt an architectural genius to study architecture properly and profoundly, to strive after a new expression, and to think no pains too great to succeed.

Architects are the poets of construction, and though they must copy and paraphrase fine examples to learn expression in their art, those who have genius should strive how they may express the new knowledge and the new phases of humanity, for if our architecture is to properly express the knowledge, wants, and cultivation of the present day, it must get a new element or at least a new flavour. You students are to be the constructional poets of the immediate future; and you should consider whom you think to be a great contemporary poet. Do you consider him who can paraphrase Milton the great poet of the age? No; you barely regard him, though you may look for the exquisite diction of Milton in the contemporary poet and for some of the old ideas, but you also ask for the embodiment of the great thoughts and achievements of the present; it is this attitude of mind which made Tennyson the favourite poet of his age among the English-speaking nations. The discarded lover evidently has his doubts about a savage life as compared with a civilised one:—

> "There methinks would be enjoyment more than in this march of mind,
> In the steamship, in the railway, in the thoughts that shake mankind."

The public, I know, think there is less genius, less study, and less labour in creating a monument of architecture than in knowing the price of brickwork or the rent of land. One of the worst signs of the present day is that so many able architects are anxious to get into a wholesale business, showing that wealth, not perfection, is their aim.

To such of us as reflect it must seem odd that we are now condemned to paraphrase the architectural works of former ages, and this is most strongly forced on those of us who are students of Gothic, for when the mediævals had solved the structural problem of securely vaulting in stone by the use of the flying buttress, there was a rapid and continuous advance, both structural and artistic, until Gothic was superseded by the revived Roman of the Italian Renaissance, and from that time forward architecture has been stationary. It seems to be taken for granted by architects and architectural writers that æsthetic invention in architecture is extinct. We cannot say that constructive invention is also extinct, for the engineers with the new materials—wrought iron, cast iron, and steel—have exceeded the feats of the Gothic architects in stone, but, except by accident, they have not created anything agreeable to look at.

The American architect, Mr. Leopold Eidlitz, was the first writer that I know who affirmed that æsthetic invention in architecture was still possible. He maintains that æsthetic advance is possible if we go the right way about it. His book entitled "The Nature and Functions of Art, especially of Architecture" is the only book I know that treats the subject philosophically and analytically. The book of Vitruvius is more like a cookery-book in which recipes are given than a treatise on Architecture. Vitruvius saw this himself, when he said that rules will never supply the place of talent.

All the Italian Renaissance books on architecture are guides to the reproduction of Roman work. Viollet-le-Duc's dictionary is a manual of Gothic architecture.

Mr. Eidlitz sweeps away much of the accumulated rubbish of the modern notion of inspiration by showing the elaborate training that the actors and musicians have to go through, and the rehearsals they have to attend, to enable them to act or play together smoothly, and the mathematical studies that are necessary for musical composers;* but his greatest gift is in holding out hopes that architecture, stuck in the mud for so many centuries, may progress again, if architects will again follow the method pursued by the Gothic architects, viz., by trying to know what is wanting and continually striving to build it; though, from the absence of symbolism in the present day, it is a hard matter. Fergusson, however, seemed to think that some originality might be secured by ignoring all the lessons of the past, and getting architects to compete for a church or chapel where style was to be abandoned. Nothing can be more true than that, if we absurdly suppose any period of past architecture was perfect, we cannot and do not want to improve on it, and if we are absolutely idle and idiotic we cannot succeed.

Mr. Eidlitz sent a letter to the Royal Institute of British Architects which was read, and was almost the subject of merriment to many of the hearers who had been trained on the usual architectural history, although his letter was fraught with the greatest promise to those who think on the subject. In the first place he stated as a self-evident fact that architecture depended mainly on structural science, and that the knowledge of statics was its foundation, and he then pointed out that in the works of Nature, more particularly in those of animated Nature, character and beauty of form were dependent on the perfection with which animals were fitted to their purpose, and that in the present teaching this was not taught. He says: "Of the differences of the beauty of a church, a palace, a courthouse, a library, and a cottage, in the sense in which we distinguish between the beauty of a hummingbird, an eagle, a bull, a horse, a lion, or a tiger, there is no definition in any educational institution." I think it must be obvious to any one not blinded by the pursuit of antiquarianism that a knowledge of statics is absolutely necessary to every architect, and that by pursuing the statical method we not only get the right form and proportion, but the true ratio of every structural feature.

Roughly speaking, a quarter of the breaking weight is the safe weight, and if, for the sake of greater endurance or greater dignity, we take but one-tenth of the breaking weight, every feature is duly proportional to all the

* If Mr. Eidlitz expressed any such opinion he is certainly wrong. A knowledge of the physics of sound, and of the ratio of vibrations which produce various sounds, is necessary for a scientific analysis of musical scales, &c.; but the great composers never troubled their heads about that; all *they* wanted to know was how to combine the accepted intervals of the European scale (which is quite arbitrary) so as to produce effective and expressive music. Beethoven was probably one of the most radically unscientific men that ever lived; and no knowledge of the physics of sound would have affected his compositions or his power of originating music.—ED.

rest, and one part is not disproportionately strong to the remainder, as we too often see enormous cantilevers or corbels, strong enough to carry the whole structure, with nothing but a 3-in. slab and a few people to support.

A great part of all other progress would be due to accurate adaptations of the requirements of each part of a building. We want each separate room to be fitted for the purpose required, which will give its size and shape, and then there is the due lighting of each room, staircase, or corridor, and this may involve lanterns; there is also the due proportion of air for each room, and this may require a dome; and each room wants its proper door, as well as the building itself. This last is not without its serious difficulties, particularly if it is to an important building which has a crush of people waiting to go in, or a crowd endeavouring to get out, though I see it mostly suggests a sewer mouth to young architects. The separate chambers have to be joined by well-lit corridors or passages proportional to the number of persons that may have to pass through them, and the different stories have to be reached by convenient and well-lit staircases, and nothing offers such an opportunity for display as a noble staircase.

If the building be for calling many people together, it may want a bell tower, such as was wanted for the tocsin in the Italian towns; or if the building is to be a landmark, it may require a spire and a clock-tower if many people are to be called together at the same time. In temples to the Deity we want the most sublime proportions, and dignified proportions for palaces of the sovereign, for great men and for public buildings, externally enriched with sculpture or mosaic to tell its story. In most public buildings there is occasion for vast windows to light large halls or staircases, though very few architects have shown the necessary invention to make these agreeable to the highest cultivation of the day, for there must be a sufficient framework to prevent the glass being blown in. Mouldings, too, are wanted to mark important parts of the structure and to express points where strains are concentrated, and the forms of these mouldings, where external, must be made to show the lights and shadows that we want by the sunlight and atmosphere of our own country, and the mouldings must be expressive and graceful as well. The Greek and the Gothic architects alone have paid any attention to mouldings, but we in England since Gothic days have been careful to avoid trying to follow their example; we only imitate their mouldings.

The Greek mouldings were exquisitely designed for a clear atmosphere and a brilliant sun, and are absolutely ineffective for the greater part of the year in England; while the Gothic mouldings are mostly wanting in grace, though the external base mouldings of the end of Hereford Cathedral are magnificent. We want to know what the material is to be in which the mouldings are to be worked, and its colour, so that we may make the best of both. The Athenians used white marble in their buildings, while the Egyptians used granite, basalt, and porphyry. Lord Leighton, in one of his addresses, pointed out the effect that great hardness and dark colour had on sculpture.

Next we come to the modelled decorations, mostly done by the sculptor and the ornamentalist, which should mainly be of human figures, for these are more interesting to man than any other work, and explain the use of the building more clearly than animals or foliage.

The next subject is the application of colour for emphasising form; the ancients seem to have mostly confined their main colours to red, blue, and gold externally, but one wants to see the experiment tried, for no one can speak of colour usefully unless he can appreciate the harmony of colour when he sees it. The Saracens have been the principal and most successful users of colour that we know, and have shown us how colour and gilding may bring out a fresh pattern on a slight changing of position, in a manner that seems magical. We are famous for our enamelled bricks and earthenware, and we see how the Persians used coloured and enamelled brick as monumental decoration in the frieze of Darius' Palace at Susa, now to be seen at the Louvre. This beautiful method of decoration is scarcely used in London or in the great manufacturing towns. I suppose it would be employed, but the employers will neither pay for the stuff nor the architect for the skill and labour expended, although the health and happiness of the inhabitants would be greatly improved by its use.

The artists in stained glass pursue the same methods as the architects, and do nothing but paraphrase old stuff, and by no means the best, for the enchanting effect of the best twelfth-century glass I have never even seen attempted, and stained-glass windows in churches are mostly only paraphrases of old work, and with, too, the old crook-backed writing. For pure entrancing effects I think the old glaziers bear off the palm—I mean those who did the windows of Chartres and in the aisles of the choir in Canterbury Cathedral, and the east window of the south aisle of the choir at York, though the full glory is only to be seen when the sun shines through them. But we want a genius in stained glass to rival the best old glass, and we also want a similar genius in the artist in mosaic, so that ours may exceed in beauty the mosaics of San Vitale and St. Apollinare *in citta* and *in classe* at Ravenna.

What we want most now is to impress upon architects that architecture is a constructive art, and that when it was so looked on it took marvellous strides, though we cannot be sure that it will do so again, as the complexity of circumstances is so great, not the least of which is human capacity, though our conceit will not allow us to admit it.

The pointing out that character and beauty is gained in Nature's animated work by perfection of function is a valuable hint in the right direction. We know that when architecture was turned over to goldsmiths, carpenters, inlayers, sculptors, and painters, there was no advance except in gracefulness and dignity; and yet these Italian artists were marvels of versatile ability such as we but rarely meet with, although the late Lord Leighton was a brilliant instance. We know that one of the most foolish things is to use columns not for support but for ornamentation, and the covering of the face of buildings with coarse rustication to attract the attention of the vulgar is a most marked evasion of any imaginative design. Let the young architectural student try to design his building with all the true requirements and in accordance with statics, and try to get the whole to tell its tale, and he will find plenty of problems to tax his inventiveness, his power of making the parts graceful and grouping features to compose well, instead of using windows that only meet the requirements of hot and sunny climates.

If we merely sit down and say that we are a hopelessly inartistic race, we shall never do anything. In the thirteenth century it was said it took forty years' study to master mathematics. I, at least, feel ashamed that the most we can now do is to paraphrase some old building of Greek, Roman, or Gothic times. It is humiliating that when our best architects go to the Far East, all they can do is to take up with that nation's vernacular, while Greeks, Romans, Saracens, and our own people during the Crusades built in their national styles.

Remember, all that an architect can do is to build; and to do this properly he must be acquainted with enough mathematics to be able to learn statics, and from that knowledge alone we should get new shapes and new proportions. It is too melancholy to think that architecture is no longer progressive, so that instead of the architect being able to dictate to the ignorant, the ignorant dictate to him. You can hardly fancy this occurring in any other trade or profession, but if we keep a fancy dress shop we have to consult our customer whether his house, shop, or office is to be of the style in vogue in the time of Pericles, of Hadrian, Justinian, or William the Conqueror, of Henry III., or of that of the Pope Alexander VI., or Leo X., Elizabeth, James I., or Queen Anne.

It is only from the students that we can hope for the bringing of architecture to life again, and this must be done by hard and laborious work in the right direction. We must first of all be thoroughly masters of statics; without that we are only groping about in the dark or making a hotchpotch of the deceased architectures of all times. We then want to study how the last precedent race of living architects, the Mediævals, had advanced, and better their improvements. Those that are blessed with inventiveness may see how improvements can be made. Nothing in architecture springs out of nothing—all is the result of endeavouring to see how something that has gone before may be improved, and make it more in consonance with the advance of knowledge and the affinities of the time. Nothing is more loathsome than imitation Gothic; we do not want to build in that style now, nor to have every edge covered with crockets, nor to have our buildings covered with geometrical figures, like those which a child makes with a pair of compasses; we want the greatest elegance with the greatest simplicity. In mediæval days geometry was a passion among all the learned, as it was the new fashion among the Saracens.

As you know that the bulk of mankind can be educated only by art, it is worth labour, self-denial, and striving to set the greatest of the visual Fine Arts again on its legs, more especially when you see so many of your countrymen, from the highest to the lowest, not only giving up their comforts and their lives, but meeting every conceivable misfortune with resignation, for the sake of their Queen and their country.

NOTES.

Standard Tests for Cement.

A GOOD deal still remains to be learnt with regard to the behaviour of cement under various conditions, and especially as to its qualities after the lapse of considerable periods of time. Moreover, the practical value of ascertained results is largely discounted, as we have previously pointed out, by want of uniformity in the detailed methods adopted by experimentalists. For the purpose of conducting tensile tests, briquettes of cement and concrete are frequently used; but, unfortunately, there is no law or custom prescribing either the exact physical proportions of such test pieces, or the distances which should exist between the gripping points of the clips used. With the view of obtaining more precise information respecting the comparative values of differently shaped briquettes, and of varying distances between the bearing points, Professor Sondericker, of the Massachusetts Institute of Technology, has completed a series of experiments, in the course of which he broke some 488 briquettes, including Portland cement neat, and three parts sand to one of cement; and Rosendale cement neat, and one part sand to one of cement. Some of the specimens were broken after one week, and the rest after four months. The sectional configuration of all the briquettes resembled somewhat resembled an hour-glass, width at the central neck being 1 in. in each instance. Two general forms were selected, one with gradually sloping sides, the other notched at the neck. The first class included standard shapes adopted by the American Society of Civil Engineers, and by other bodies, and the second was representative of the German standard. Judging from the published results of the inquiry in question, it appears that the tensile strength of cement briquettes varies directly with them. In notched specimens, fracture was invariably within the notch, but there was a diminution of strength of about 13 per cent., as compared with the un-notched form, and as the latter proved more sensitive to adverse conditions, it seems to be preferable to the other. Whilst there is no special advantage in always securing a central fracture, it is a desideratum that any briquette should break in the middle if properly moulded and tested, and elsewhere if these conditions are not complied with. Again, it was demonstrated by Professor Sondericker that the strength and other properties of the briquettes varied with the constructive details of the clips. Solid metal gripping points, properly rounded in both directions, were found preferable to rolling or pivoted points. It is, of course, necessary in all tests of the kind that the pull throughout should be along the axis of the briquette, in order that no bending action may be established. From the results we have quoted, it is apparent that for the satisfactory performance of standard tests, uniformity is necessary—(*a*) in the form of the test pieces, (*b*) in the distance between the gripping points, and (*c*) in the form of the gripping points. Further, there is evidence that the greatest care should be taken so that force may be actually exerted in the intended direction.

Wireless Telegraphy.

MR. MARCONI'S lecture at the Royal Institution last Friday evening marks an epoch in the history of telegraphy. We were able some months ago to announce that the distances over which messages could be sent had been very considerably increased. It appears that this increase is due to an improvement introduced by Mr. Marconi into his receiving apparatus. He puts a transformer across the coherer so as to increase the pressure set up by the induced oscillations at its terminals. The practical result of this is to enormously increase the efficiency of his apparatus. In last year's Naval Manœuvres the limit of signalling with the old apparatus was seven miles, but by introducing the transformer signalling could be carried on with certainty at a distance of sixty miles. On land signalling is carried on between Harwich and Chelmsford in England with Wimereux in France. The poles to carry the vertical wires are only 150 ft. high. If we draw a straight line between Chelmsford and Wimereux, then, owing to the curvature of the earth, there is a hill of water over 1,000 ft. high between them. It follows that the ether waves with which he signals either go straight through the earth and water or bend round the curvature of the earth. The former alternative seems the preferable one. The report, widely circulated, that his apparatus had been a failure in South Africa owing to iron in the hills, was untrue. Iron would have no effect whatever on the working of his system. As a matter of fact, by means of kites, communication had been established directly between De Aar and Orange River, a distance of seventy miles, and there were three intermediate stations. In conclusion, he referred to the great progress made in wireless telegraphy last year, and stated his belief that the progress made this year would be very much more rapid. He believed, for example, that sending telegrams to, and receiving telegrams from, ships at sea would become as common as sending telegrams on land.

Lifts at the Law Courts.

THE new lift at the north-west entrance to the offices at the Law Courts is at last in operation. The second lift on the east side is not yet completed. The astonishing thing is that this building should have been without a single lift for so many years, for lifts are a necessary part of the equipment of such a building. They are necessary both for the business convenience and, one may say, the health of those who have business at the Courts. It is clear, however, that the length of the building from north to south is so considerable that a lift at each corner is necessary. Those who have business in the Chancery Chambers at the south end, and come from the City, do not want to waste their time by walking outside the building to the north end, and then walking back again along the corridors. Bad as the Law Courts are from a business point of view, there is no doubt that if the authorities would endeavour intelligently to try to remedy these defects, it is possible in many ways to do so. These new lifts have only been placed in the building after considerable pressure both from the legal profession, officials, and Members of Parliament, and this should not have been necessary if the business requirements at the Law Courts were properly considered by the Lord Chancellor's Department and by the Board of Works

Napoléon on London Improvements.

IN the *Century* for the current month, under the heading "Talks with Napoléon," there are some extracts from portions of Dr. O'Meara's recollections of Napoléon not (as we understand) previously published.* The conversation which is here recorded gives a fresh instance of Napoléon's extraordinary faculty of seeing everything that could be done everywhere, for he actually suggested the Thames Embankment, besides other improvements which have been talked about but never carried out. He said that "if he had anything to do with London he would make a grand street from St. Paul's to the Thames." Then he added, "I understand that most of your public buildings are disfigured with mean old buildings in the vicinity. I would remove all these. Could you make, he said, a street along the banks of the Thames?" O'Meara said yes, but that the present streets were very mean and narrow, and did not extend along the banks, and there was an interruption of storehouses every here and there. Napoléon replied, "I would make two grand streets, one on each side of the river, wide and capacious." He asked about the Thames bridges, said there were not enough (there were then three), asked whether they were iron or stone, and said "stone is better." Then he went on to speak of the architectural improvements he had made in Paris. "There were several buildings," he said, "belonging to Government—convents, monasteries, old churches; I blew them all away like that"—holding up his finger as if he were holding some light object, and blowing contemptuously—"and in their places I formed some streets which at least were of some use." Hearing that the English Government had purchased some property with the view of commencing a fine street from Carlton House (Regent-street), he said "Yes; if I had been there I should have done it long ago."

The Western Ophthalmic Hospital, Marylebone-road.

THE Governors make an appeal for subscriptions to a sum of 7,000*l.* which is required for the proposed re-building of the hospital, which was established in the New, now Marylebone, road in 1856. The present building, which is quite inadequate to meet existing requirements, consists of an old house, at the corner of Circus-street, which according to one account had been the later manor-house of Lilleston, corrupted into Lisson. At the time of making the Domesday Survey Lilleston covered five hides in Ossulston Hundred. Having remained for a long period in religious hands it passed to the Knights Hospitaller of St. John of Jerusalem. In 1512 Prior Docwra granted a fifty years' lease to John and Johan Blennerhasset of a farm — being "parcel of the manor of Lilestone" — extending over 270 acres, which their executors in 1532 sold in reversion to Lord Chief Justice Sir William Portman, Bart., who afterwards acquired the fee simple; that land now constitutes the estate in Marylebone Parish of Lord Portman. After the suppression of the Order of St. John the major portion of the manor was

* Dr. O'Meara, it may be remembered, was a kind of unattached medical friend or honorary medical attendant to Napoléon during the first portion of his St. Helena imprisonment, and published his recollections of him, but appears to have had in MS. a good deal besides what was then published.

granted in 1548 to Lord Willoughby and Thomas Heneage, from whom it ultimately passed to Captain Lloyd, who sold the property in several lots in 1792. The place names set out in Prior Docwra's lease are perhaps worthy of mention, and the land boasted of two gibbets; the names are —"Great Gibbet field, Little Gibbet field, Hawk field, and Brock Stand, Tassel Croft, Boys Croft, and twenty acres Furse Croft, and two closes called Shepcott Haws parcel of the manor of Lilestone." Lisson-green, which lay just north-west of the old "Yorkshire Stingo" tavern, was not included in the lease.

Hall i' th' Wood, Bolton.

MR. W. H. LEVER has presented this old house, together with a sum of 1,200*l.* for its maintenance and repair, to Bolton. It was the home during some years of Samuel Crompton, whose father rented two or three rooms of the house, and who there devoted five years, 1774-9, in secret to the invention of the spinning mule, a machine that was long known as the "Hall i' th' Wood wheels," which he sold to a body of about eighty manufacturers for 60*l.*, in or about 1785. The woods have long since been cut down, but the house is fairly well preserved; there are views of it in Mr. Gilbert J. French's "Life and Times of Samuel Crompton," and in C. Hall's "Ancient Baronial Halls of England." It is believed that the half-timbered portion was built at the close of the fifteenth century. The south front, of stone, is of later date; over the porch are the initials and figures "A.A.N. 1648," which commemorate its building by Alexander Norris, whose daughter Alice brought the property in marriage, in 1654, to John Starkie, of Huntroyde, in whose descendants it has since vested. The coat-arms of Starkie, in plaster, are in the room where Crompton worked at his calling.

The Pastel Society.

THE exhibition of the Pastel Society, at the rooms of the Institute of Water-Colours, suggests the question—what are the class of subjects for pastel? As far as studies for composition are concerned it is useful for landscape, but not suited for finished landscapes except where there is a broad general effect, either cold or warm, and not much delicate gradation of colour. M. Lhermitte, in "Noonday Rest" (98), has made a powerful effect of broadly massed lights on the figure and the landscape. Mr. Terrick Williams, in "Market-day, Pont-Aven" (48), and "Morning, St. Valéry-en-Caux" (50) has given successful treatment of two scenes one of predominating warm colour, the other of predominating greys. On the other hand Mr. Duff's uncomfortable greens in "A Suffolk Lane" (25), and his prismatically-coloured cows in "Summer Weather" (27) show the short-comings of pastel. The manner of using broad strokes of one colour over another, to get the prevalent tone required, is well illustrated in Mr. Terrick William's "St. Jacques, Dieppe" (51), where all the shadowed portions of the building are seen, on close examination, to be scored over with lines of a bright blue, which at a proper distance blends entirely into the tone wanted. Perhaps the finest example of this method of getting broad tone is shown in Mr. Austin Brown's "A Moonlight Night" (187), a very fine and effective piece of work. The most pictorially effective of all, however, are the first four works in the numbering, by Mr. Fritz Thaulow, who seems able to do what he likes with pastel, without betraying its weaknesses. These works, "Storm at Dieppe," "Evening at the Riverside," "After the Snowfall," and "Night in Norway" should be carefully studied by those who want to see how effect can be got with pastel. A good many portraits in the exhibition also show how well it is adapted for a rather slight sketchy order of portrait, in which the chief finish is bestowed on the features, and the accessories lightly sketched in. We prefer these to the attempt at highly-finished costume portraits. The exhibition is a very good and interesting one.

Cathedral Pictures by Photography.

PHOTOGRAPHS of architecture are often disappointing from being hard in effect and with too strongly-marked black shadows. Mr. Frederick Evans is issuing a collection of photographs from cathedrals, reproduced in the finest photogravure by the Swan Electric Engraving Company, and issued in signed proof impressions, which are without these defects. It would seem that by this intermediate process of photogravure the hardness of the original photograph is got rid of, while the accuracy of detail which is the special value of a photograph remains. At all events, the specimens sent to us are of quite exceptional beauty in this class of architectural illustration, and are worth the attention of those interested in obtaining good illustrations of architecture.

LETTER FROM PARIS.

THE annual Salon of the Société des Artistes Français will be opened to the public on April 7; the "Vernissage" will take place the day before. The temporary building to be erected on the Place de Breteuil, near the Exhibition of the Champ de Mars, from the designs of M. Thoumy, will be commenced without delay.

The carpenters' strike, which it was feared might take alarming proportions, and be an inducement for the other trades to follow, has, fortunately, been settled in a satisfactory manner. M. Picard, Directeur-en-Chef of the Exhibition, was appointed arbitrator, and it was decided to offer an extra penny per working hour to all carpenters employed on work above 80 ft. high, those working below this height to receive the present pay. The strikers accepted the terms, and work has now been re-commenced.

It has been a question for some time to arrange a fit place of reception for the Royal guests who propose to visit Paris during the coming Exhibition, and the various palaces and mansions have been passed in review; the Château de Compiégne and the Château de Longchamps were each proposed, but were found unsuitable for various reasons; it has at last been decided to hire for a period of ten months the sumptuous mansion and grounds situated at No. 41, Avenue de Bois de Boulogne, property which formerly belonged to Dr. Evans, dentist to the Empress Eugénie. It was here that on the evening of the fall of the Empire the unfortunate Empress was led, disguised, by Dr. Evans. The mansion will be renovated and richly furnished.

The death of M. Paul Sedille, Architecte de Gouvernement, ex-Vice-President of The Société Centrale des Architectes Français, Honorary Member of the Royal Institute of British Architects, and Officer of the Legion d'Honneur, is much regretted in architectural circles. Inheriting the natural gifts of his father, M. Jules Sedille, architect, painter, and musician, he has left many fine and interesting works behind him. The Magasins de Printemps, the Basilique de Jeanne Darc at Domremry, the Porte des Beaux-Arts at the 1878 Exhibition, the Monument to Schneider at the Creusot works, the installations at the 1889 Exhibition, the vase offered by the Ville de Paris to Nicolas II. in 1897, are among the best known of his works; and numerous mansions, villas, and *maisons à loyer* in and around Paris give testimony to his artistic skill in logical design and decoration. He was awarded the medal for Private Architecture given by the Société Centrale des Architectes Français.

The Commission de Vieux Paris has decided to carry out the excavations necessary to disclose the remains of the interesting Gallo-Roman Theatre near the Rue Racine. The City of Paris has acquired the documents left by M. Vacquier, who for a number of years carefully studied in an archæological point of view the various excavations made at different parts of old Paris, and these will allow the continuation of the work of excavation in the arena discovered in 1861.

The important work for the coming Exhibition is far from being yet completed, and it is no longer a matter of doubt that the various work of building, decoration, and installation will not be ready for the opening day, fixed for April 14. The buildings on the Esplanade des Invalides appear to be the most advanced, and exhibitors are already preparing their installations. The buildings on the Champs de Mars are much behind hand, the decoration has not yet been commenced, and some of the official work is so much delayed that exhibitors, in a very large number of cases, are unable to commence the heavy work of foundations necessary for their machinery and other exhibits. The Château d'Eau and the Palais d'Electricité are still in a skeleton form, and will certainly take some time to decorate in the sumptuous manner shown by the maquettes and drawings. The two Palaces of Fine Arts in the Champs Elysées are being carried on as rapidly as possible, but it is very doubtful whether the interiors will be ready until some time after the opening of the Exhibition. The Alexander III. bridge is, however, well advanced, and the graceful entrances to the bridge are nearly terminated. The Palais des Nations lining the river side along the Quai d'Orsay are now all nearly completed as regards their exteriors, and produce an exceedingly effective ensemble. The Royal Pavilion is almost completed on the exterior, and the various English firms which undertake the decoration of the interior are about to commence work. The Royal Pavilion, although in itself a large building, is somewhat dwarfed by the tall and rather heavy buildings adjoining it. This building will, however, be one of the neatest on the whole line; its exterior is simple but imposing, and the interior will be highly decorated. It is the only building representative of domestic architecture, all the others being official or religious in character.

M. Georges Berger, Deputy, and President of the Union Centrale des Arts Decoratifs, has drawn the attention of Parliament to the little-known treasures of the "Mobilier National," at present in the keeping of the State Department "du Garde-meuble," and the importance of preserving them. The collection includes about 600 ancient pieces of tapestry, piled up in storage and exposed to all kinds of risks. Other tapestries of great value are dispersed among the Ministerial offices at the Elysée, and at the various French and foreign Embassies. They are sometimes utilised at exhibitions or at public fêtes, and recently some splendid pieces were sent to Madagascar to decorate the house of the French Resident. M. Berger protests against this carelessness, and urges that these ought to be placed under the care of the Gobelins manufactory, where there are means of storing them safely and repairing them if injured. He also recommends that from 250 to 300 of the finest examples should be selected to form a permanent collection at the Louvre.

At the Hôtel de Ville much consideration is being given to the preparations for the "Congrès de l'Art Public" to be held there in August. M. Labasquière, the Vice-President of the Municipal Council, who has taken the initiative in the matter, is ably seconded by M. Marcus-Vachon, M. Chas. Lucas, and M. Chas. Normand, who with him have drawn up the main scheme for this exhibition, which will consist of a series of models and engravings illustrating whatever relates to the embellishment of cities, as well as whatever tends to injure and disfigure them in this sense. Among other things there is to be a model of the Place des Victoires in its original monumental aspect, contrasted with one showing its present condition, disfigured by advertisement placards and modern

houses out of keeping with the original design. The Champs Elysées, in the same manner, is to be illustrated at three successive epochs—under Louis Philippe, at the time the Palais de l'Industrie was built, and as it will be after the great Exhibition of this year. Other models will show the Esplanade des Invalides in the former and present aspects; the Place du Nôtre Dame in the sixteenth, eighteenth, and nineteenth centuries; the Place de l'Hôtel de Ville in 1832; the entrance gateways of Paris and the modern aspect of these sites; the hill of Montmartre in its ancient aspect, and as it will appear with the new square and the great church towering over it. A number of provincial towns will be represented in the exhibition, and a good many foreign countries have also promised to contribute, especially Belgium, which is so rich in ancient monuments, and where so much pains are expended on the embellishment of modern streets.

The series of special exhibitions usual at this time has commenced. That of the Cercle Artistique in the Rue Volney, is noticeable for the fact that a very clever artist, M. Axilette, a former Prix de Rome, has turned Impressionist. His two pictures, "La Vallée du Morin" and "A l'Ombre," are fine landscapes of their school. Among other good works are the "Fin de Journée" by M. Nozal, the "Moulin de Cernay" by M. Gosselin, and the "Place du Marché, Concarneau" and the Port de Strood (England) by M. Legont-Gérard. M. Bonnat has a fine portrait of a young lady, and M. Carolus-Duran sends a pretty sketch, "Les Baigneuses." In sculpture there are some busts by M. Denys Puech and two statuettes by M. Lauri.

Some American artists, of whom there are many resident in Paris, have opened an exhibition of their own at the Durand Ruel gallery. Among the best exhibits are "Effet de Soir," by Mr. Campbell, "L'Heure de l'Angelus" by Mr. Humphreys, and "Etude de Nuit" by Mr. Tanner. The Russian artists in Paris have also opened their small annual exhibition at the usual place in the Rue de Rome, which contains some interesting landscapes and other studies.

At the Luxemburg, M. Bénedite has arranged a fine exhibition of sketches, drawings, and studies by Puvis de Chavennes. Among these are portions of his decorations for the Museum at Amiens—"La Guerre," "La Paix," "Le Travail," "Le Repos," and the studies for the "Charles Martel," "Le Ravitaillement de Paris," and "L'Enfance de Ste. Géneviève," which are in the Panthéon; also a study for a picture, "Jeune Fille au Bord de la Mer," one of the finest of his compositions.

Of the old Palace de l'Industrie, which has sheltered so many exhibitions, there now remain only two small portions; a pavilion near the large palace of the exhibition, which will soon however disappear, and the old grand entrance, which, in the middle of the Avenue Alexandre III. is like a small "Arc de Triomphe" forming a frame to the perspective view extending to the Invalides. This archway also will soon disappear.

THE COMPETITION FOR INFECTIOUS DISEASES HOSPITAL, BURY, LANCASHIRE.

UNLIKE some other recent Lancashire competitions, this at Bury has been eminently fair and satisfactory. The instructions to architects were well drawn up, the premiums were ample (amounting to nearly 1½ per cent. on the cost originally contemplated), the inevitable answers to questions were clear and were placed in the hands of all the competitors at an early date, a capable assessor was appointed, and his decision was endorsed by the Committee within a month of the designs being received. For all this the Corporation of Bury deserves the thanks of the profession. Forty-seven designs were received, embracing about 400 sheets of drawings, and although many of these are clearly the work of pupils and assistants and of architects who have had little or no experience in the design of hospitals, there are a sufficient number of designs worthy of the occasion. The first premium (100*l.*) has been awarded by the assessor, Mr. Alexander Graham, F.R.I.B.A., to Messrs. Pole & Little, 9, Gray's Inn-square, London; the second (50*l.*) to Messrs. C. K. and T. C. Mayor, John Dalton-street, Manchester; and the third (25*l.*) to Messrs. Gale & Minty, 4, Serjeants' Inn, Fleet-street, London. Not one of these designs is perfect, but we agree with the assessor that they are the three best, and there can be little doubt that Messrs. Pole & Little's design on the whole merits the first place.

The site of the proposed buildings is of somewhat peculiar quasi-oval shape, bounded at the south end by the existing hospital, along one irregular side by a railway cutting, and on the remaining sides by a steep slope leading down to a small stream. The only good approach to the ground is by a bridge over the railway about the middle of the westerly side. From this bridge a public road skirting the site leads to the existing hospital, and is continued thence as a public footpath. Many of the competitors do not appear to have realised the importance of the block-plan of buildings of this character, and some otherwise good designs have undoubtedly been rejected for this reason. Some have arranged the blocks in the form of a quadrangle; others have placed one or more of the pavilions too near the public road; and others have shown the administration block, ambulance house, and discharge block in inconvenient positions. Messrs. Pole & Little have undoubtedly succeeded in producing an excellent block-plan, although somewhat crowded. The lodge and entrance gates are placed immediately opposite the end of the railway bridge, and from this an axial line is taken, running from front to back of the ground in a west-south-westerly direction. On this line the Administration Block is placed centrally at a suitable distance behind the lodge. This block is oblong in shape, the greater length being at right angles to the axial line. The entrance is in the centre of the front, and a corridor leads through the building, along the axial line, to and through the kitchen block, whence it is continued as a covered way. To the right of this way, at about the middle of its length, is placed the scarlet fever pavilion, and to the left the diphtheria pavilion. The typhoid and isolation pavilions are on the right and left respectively of the covered way at its furthest end, but are only about 45 ft. apart. All the four pavilions have their ends towards the covered way, and consequently run in a north-north-easterly and south-south-westerly direction from it. It is satisfactory to note that there are no branch-covered ways leading from the main one to the pavilions, as they would be out of place in a system of hospitals for infectious diseases. Space is reserved for four future pavilions to be erected beyond those shown, and for two further back. The discharge block is placed to the left of the kitchen block, and the laundry, mortuary, and ambulance buildings to the right of the administration block and lodge, so as to have convenient access to the public road. The kitchen department is convenient both as regards position and arrangement.

The administration block is very well planned, with an octagonal hall in the centre at the intersection of two corridors running through the building from front to back and from end to end. The matron's rooms are grouped together, and also the doctor's, instead of being scattered about as in some of the other designs. On the first floor the nurses' bedrooms, &c., are placed on both sides of the longitudinal corridor, and the servants' quarters follow the same arrangement on the second floor. Fire-escapes are provided at both ends of the corridors on both floors. The chief fault to be found with this building is the small size of the rooms, although the authors have probably been guided in this by considerations of economy. A nurses' dining-room, 11 ft. 9 in. wide, can scarcely be considered satisfactory, and servants' bedrooms, 9 ft. 6 in. by 8 ft. and only 4 ft. high at the front and 8 ft. 6 in. at the highest part, are not what one expects in a hospital.

The scarlet-fever pavilion possesses some good features and also some defects. On the right of the entrance corridor is the receiving room with its bath recess, and on the left the room for clothes, and also a small coal-place and water-closet. Between these and the pavilion itself the corridor is well lighted and ventilated by windows on both sides, and a doorway is provided, on the side nearest the covered way, for ordinary use. The entrance hall and nurses' duty-room occupy the centre of the pavilion, and on each side are wards for ten beds, measuring 60 ft. by 26 ft. by 13 ft. high. In the front angles of the entrance hall small closets are shown for clothes and food, and this position allows them to be properly lighted and ventilated, although it has the disadvantage of making the hall somewhat dark. At the end of each ward, approached by a short cross-ventilated passage, is a group of conveniences including sink-room, water-closet, and bath-room. The position of the separation ward leaves something to be desired. It adjoins the east side of the pavilion, part of it being in front of the duty-room so as to be inspected from this room, and part in front of the female ward from which it is directly entered. The first bed in this ward is therefore robbed of one of its windows, and the window between it and the second bed is darkened by the closet, &c., of the separation ward, which project in front of it at a distance of only 8 ft. The separation ward has two narrow north windows, one on each side of the bed, and one south window, the latter being badly placed in the recess, 7 ft. deep and only 8 ft. wide, formed by the main pavilion and the closet, &c., of the separation ward. Several of these defects would have been obviated by projecting the conveniences on the east instead of the south side of the ward, and a further improvement would be the disconnexion of the conveniences by means of a short cross-ventilated passage. The ventilation of the large wards is scarcely satisfactory. The windows do not extend within a foot of the ceiling, and there are no air-inlet grates near the floor. Two extract-ventilators are shown for each ward, but the ducts are only 12 in. in diameter. Assuming that they will extract the air at the rate of 5 ft. per second, they will only change the air of the ward *once* an hour. Even if we add to this the extracting power of the stove, the result is quite insufficient.

The diphtheria pavilion is planned on exactly the same lines as that for scarlet fever, but the wards contain only two and four beds, respectively; and there is no separation ward. A wall-space of 12 ft. is not sufficient for diphtheritic patients. The typhoid fever pavilion also follows the same lines, and has a male ward of eight beds, a female ward of six beds, and a female separation ward exhibiting the same defects as that in the scarlet fever pavilion. The isolation block presents some more novel features, but requires a certain amount of alteration to make it satisfactory. It is planned in two symmetrical halves, each containing a duty-room, bath recess, and two two-bed wards. Two of these wards, 26 ft. by 12 ft., are placed side by side in the middle of the block, and are lighted from both ends, but the ward-conveniences project from the east ends in such a manner as to leave each of the adjacent beds with only one window, and that is injured by the projecting conveniences. The laundry is planned with separate departments for the patients and staff, a feature which, according to the answers to questions, was not desired. It is well arranged, as are also the remaining buildings.

The lodge and administration block are the only buildings with any pretensions to architectural character. The style adopted is Georgian, and is good of its kind, although somewhat heavy. The drawings are well done, and are much improved by washes of indian ink, the roofs being tinted darker than the walls. A good bird's-eye view accompanies the design.

The second premiated design, by Messrs. C. K. & T. C. Mayor, is, in some respects, better than the first, but the block plan and the administration block are decidedly inferior. The administration block is not conveniently placed with regard to the pavilions, and it is planned with its major axis at right angles to those of the pavilions, so that it practically forms, with the typhoid and scarlet-fever blocks, three sides of a quadrangle. Among the defects of the administration block we note the scattering of the matron's rooms. The doctor's room does not communicate directly with the drug-store or dispensary, and the doorway of his water-closet occupies a prominent position in the large entrance-hall. On the first and second floors the corridors are in the form of a T. The ward pavilions possess some good points. The windows run quite up to the ceilings; most of the ward-conveniences project from the angles of the wards, and thus allow windows to be placed in the ends of the wards; but the duty-rooms of the typhoid and scarlet-fever pavilions are so placed that they do not command a view of both wards, and the separation-wards are improperly lighted and ventilated. The diphtheria block has the beds arranged in two two-bed wards and two one-bed wards, and the isolation block has four

two-bed wards following very closely the arrangement recommended by the Local Government Board.

Messrs. Gale & Minty show a general grouping of the blocks very similar to that of the first premiated design, but the ambulance-house, mortuary, and laundry are not so conveniently placed. The lodge is very nearly opposite the end of the railway bridge, and the administration block is a little farther back, but more to the south. As in Messrs. Pole & Little's plan, the kitchen department is behind the administration block, and connected with it by a corridor. The pavilions are placed still farther in the rear, on each side of the axial line running through the administration block and kitchen department. On the right are the scarlet-fever pavilion and the isolation block, on the left are the typhoid and diphtheria pavilions. Space is provided for two additional pavilions, one opposite each end of the administration block. The buildings run from north-east to south-west.

The planning of the administration block is not altogether satisfactory. As in the first premiated design, two corridors intersect in the middle of the building, but it was a mistake to block the ends of the long corridor by the lavatories and water-closets, and it was also a mistake to crowd eight servants into two bedrooms, each measuring only 14 ft. by 15 ft. 6 in. If the administration block had been better planned, this design would probably have obtained the first premium, as the ward-pavilions are in some respects better than those in the first and second premiated designs. Even as it stands, we think it deserved the second place. It is, in our opinion, superior to the second premiated design in its block plan, its administration block, and the arrangement of the separation wards and duty-rooms as well as in its architectural character. The scarlet-fever pavilion has the receiving ward to the right of the entrance corridor, and the larder, coal-place, lavatory, and water-closet to the left, and between these and the pavilion the corridor is lighted by windows on both sides as in the first premiated design, the chief difference being that no bath is provided for the receiving ward. The entrance-hall and duty-room are in the middle of the pavilion, and two wards extend on either hand for eight and ten beds respectively. Two octagonal separation-wards, one for males and one for females, are provided, the end of the duty-room being semi-octagonal in order to fit between them. The first bed of each large ward is robbed of one of its windows as in the first design, but the separation-wards themselves are better lighted, and are easily inspected from the duty-room. The conveniences for the wards are at the ends of the buildings, and are approached by short cross-ventilated passages. One point against the design is that only twenty beds are provided in this pavilion, although twenty-one are demanded in the instructions. The typhoid pavilion is on the same lines, and contains a male ward for eight beds, a female ward for six beds, and a female separation-ward for one bed. The large wards are only 24 ft. wide, but a wall-space of about 15 ft. is allowed for each bed; in the scarlet-fever pavilion, the authors have shown a width of 25 ft., and a wall-space of about 12 ft. 6 in. per bed. The diphtheria pavilion is simply planned with two wards containing three beds each, and the duty-room between. Each ward measures 36 ft. by 18 ft., and has windows on both sides, but the wall-space of 12 ft. per bed is too small. The isolation block is symmetrically planned for males and females, each department having two two-bed wards (30 ft. by 18 ft.), with nurses' duty-room between. The windows of these wards are better placed than in the first premiated design.

It is unnecessary to describe at length all the remaining designs. Some, however, call for brief comment.

Design No. 1 is not by any means without merit, but the isolation wards (24 ft. by 13 ft.) are too small for two beds, and the ambulance house is placed almost as far from the entrance gate as possible. The author of design No. 4 has given his typhoid and scarlet fever pavilions a rather complicated arrangement by providing three single-bed wards in each. No. 6 shows a crowded block plan, and has made the mistake of providing covered ways between all the buildings. The eleven sheets of drawings illustrating design No. 7 show a scattered arrangement of the blocks, an L-shaped typhoid pavilion and two scarlet-fever pavilions (one for each sex)—a feature which would increase the cost of erection and of management. No. 9 possesses some good features, but the block plan is rather crowded. No. 10 also has a badly-conceived block plan. No. 11 is better in this respect, and has also a good administration block. The author of No. 12 is evidently a tyro in hospital design; in most of the wards a wall-space of about 9 ft. is allowed for each bed, and nurses' duty-rooms are conspicuous by their absence. No. 13 exhibits two-storied pavilions, both for typhoid and scarlet fever, a great blunder.

Design No. 14, merits more consideration, although it is strictly speaking out of court, as the drawings are coloured, and this is contrary to the instructions. The separation-wards in the typhoid and scarlet-fever pavilions are octagonal, and are approached from the entrance halls by means of short corridors between the duty-room and the large wards. The ward walls adjoining these corridors have large glazed openings, so that the wards can be inspected through the glazed hatches of the duty-room opposite. By this arrangement of the separation-wards, the main wards can be properly lighted from end to end, a distinct advantage. The block plan is not without merit, but the pavilions encroach too much around the administration block. The draughtsmanship displayed in this design is excellent.

The block plan of No. 15 is good in the main, but it was a mistake to place the long isolation block east and west when the other buildings run north and south. The typhoid and scarlet-fever pavilions are spoilt by the pairs of small wards, only 11 ft. 6 in. apart, projecting about 25 ft. from the main wards.

No. 16 is original in placing the typhoid and diphtheria wards in one pavilion, and No. 17 makes the mistake of providing two duty-rooms for the scarlet-fever pavilion.

Design No. 19 is among the best, but is spoilt by the extravagant planning of the administration block around a central area about 30 ft. square. The block plan is remarkably like Messrs. Pole & Little's. The pavilions are well-planned, but the separation-ward in the scarlet-fever pavilion is too far from the duty-room.

No. 20 shows three duty-rooms for the eight beds in the isolation block. In No. 21 the administration block is too elaborate, and has the defect of a central area. No. 22 has a good block plan and administration department, and the ward pavilions possess some interesting features. The separation-wards are octagonal and project from the corners of the free ends of the large wards; this arrangement leads to the ward conveniences being projected from the middle of the side walls of the wards. These various erections interfere with the proper disposition of the ward windows. The isolation block has four octagonal wards containing two beds each, with two duty-rooms in the middle of the group. No. 26 has a wasteful administration block with a corridor 72 ft. long and only 4 ft. wide. In No. 27 the corridors are only 3 ft. 6 in. wide, and the building is arranged around a central area about 40 ft. by 22 ft.; the pavilions are of considerable merit. The author of No. 29 has a good arrangement of the separation ward, but his plans exhibit a lack of the minor requirements of ward pavilions, such as coal-stores, larders, linen-stores, &c. No. 35 is well drawn, and is the only design which shows pavilions with the two wards forming an obtuse angle with each other instead of being in a straight line; such an arrangement is not desirable for infectious diseases. No. 41 is also one of the good designs, but it was not wise to bring the isolation block within 40 ft. of the public road; two separation wards (one for each sex) are provided in the scarlet fever pavilion. Nos. 42 and 45 are also good designs, the latter being shown in a very neat and careful set of drawings.

In conclusion, we may add that, with the exception of the three premiated designs and one other design (by a local architect), no names are appended to the drawings, nor were we allowed to see the reports and estimates submitted by the competitors. As these are really part of the designs, we certainly think that they ought always to be exhibited with the drawings.

INFANT SCHOOL, PORTRACK, STOCKTON-ON-TEES.—The Stockton School Board are about to erect an infants' school for 200 children at the corner of St. Ann's-road and Agnes-street, Portrack. The plans have been prepared by Mr. E. A. Whipham, architect, Stockton.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

A MEETING of this Institute was held on Monday at No. 9, Conduit-street, Regent-street, Mr. Wm. Emerson, President, occupying the chair.

The Late William White.

The minutes of last meeting having been taken as read,

Mr. Alex. Graham, hon. secretary, said it was with much regret he had to announce the death of Mr. William White, an architect of high standing and an active and eminent member of the Institute, who was elected a Fellow in 1859. Some forty years ago William White was a conscientious and successful worker in the school of the Gothic revival, and he (the speaker) doubted whether, in that band of ardent enthusiasts, there was any one who paid more respect to the teachings of Welby Pugin, or who strove with greater fidelity in his work and by his desire to apply the principles enunciated in that school, than William White. As a mark of respect to his memory, it was proposed to publish in the *Journal* a short memoir of his career, mentioning the principal works on which his reputation was established; and as a further mark of respect he would ask them to agree to a letter of condolence to the relatives and friends of their deceased colleague—a worthy man, a very faithful member of the Institute, and a very good architect.

This having been agreed to in silence,

Mr. Bennett, the President of the Manchester Society of Architects, was welcomed by the President.

The Royal Gold Medallist for 1900.

The President said the Council intended to submit the name of Professor Lanciani to her Majesty the Queen as the recipient of the Royal Gold Medal for the present year. It was the practice of the Institute to give the gold medal to a foreigner about every three years, and this year they had decided to award it to Professor Lanciani, who is Professor of Roman Topography in the University of Rome, a Correspondent of the Institut de France, D.C.L. Oxon, and he has been an Hon. Corresponding Member of the Royal Institute of British Architects since 1894. Professor Lanciani had contributed very largely to our knowledge of ancient Rome. Should her Majesty consent to the proposal of the Council, this would be the second time since her reign that Italy had carried off this honour.

President's Address to Students.

The President then delivered the following address to students:—

"It is now my official and, I may add, also my pleasing duty to say a few words to our students, the younger members of the profession. In doing so I think it would not greatly advantage you were I to enter into the details of an architect's work in relation to the many subjects on which he may be called upon to exercise his talents, or were I to enlarge on my own experience in life and endeavour to explain for your benefit such things as, for instance, the points that should enter into your consideration when preparing plans and designs for an ordinary town or country house, though this is most likely one of the first subjects that many of you may be employed upon.

Nor do I propose to set forth my views as to what principles should be adopted in arranging a cathedral or church to meet modern congregational requirements, or what period or style should be your *point de départ* in preparing such a design, though this also is a problem which many who are ambitious will possibly early start upon solving. Neither do I think it would do any particular good to state on what lines I may think you should proceed in entering upon a competition, say, for a monumental structure, of the town hall or other public building type, which, nevertheless, is an effort that many of you will doubtless shortly make.

Any one of such subjects would form good material for an exhaustive paper, but all are details of the knowledge an architect should have, and may, or indeed must, be studied and thought out by the inquiring and perceptive mind of the student who is hoping to succeed in his profession. Besides, I have no doubt you will hear from Mr. Bodley many wise suggestions as to principles of planning and designing in the course of his critical remarks on the drawings submitted for

the medals and prizes. What I therefore think of doing is rather to direct your attention to several essentials that lie at the root of the matter in the practice of architecture, if success and noble work be aimed at—almost first principles rather than details. I hope the few points I shall touch on may be found of some practical use, and perhaps elevate your thoughts in regard to the importance of, and the responsibilities attached to, your art and profession, and also perhaps be incentives to prosecute with vigour the necessary studies in the line of life you have selected.

The practice of architecture, I need scarcely add, is quite one of the most toilsome and difficult, as well as one of the most noble, worthy, and interesting of all secular pursuits, and one in which the life and history of a people should be indicated more than in any other. To enter upon it is, therefore, a very serious step for a young man to take. Architecture is not solely a fine art, nor is it altogether simply a profession.

It has two distinct sides. The one is the artistic side, the other the practical and business side, and both are as essential to each other as the stomach to the head. I allude to this because one cannot help feeling that some of us appear to fancy that the sum-total of architecture is comprised in the facile preparation of drawings that shall show well on paper. The design may be architecturally good, and artistically and correctly drawn; or it may be not good, and trickily and untruthfully drawn; and also we appear to lose sight of the effect of materials and detail and of the important fact that the practice of modern architecture includes, besides the artistic element (without which it can only be termed building), the necessity for a knowledge of a vast series of practical subjects. For instance, without a certain amount of legal knowledge an architect cannot safely advise his employers regarding contracts with builders, or in respect to the purchase of or dealing with building sites. He should understand the respective legal rights of tenants and owners of property, and the laws as to rights of light and air, and adjoining owners. He should be acquainted with the sanitary and protective enactments for buildings erected under the laws of the Local Government Board, and factory and other Acts, and under school regulations; also the legal points in respect to the rights of the parishioners and clergy in ecclesiastical edifices: neither can he ignore such legislation as the Workmen's Compensation Act, which has had to be taken into account by our Council in dealing with the form of contract between employers and builders, and he must understand the legal side of the County Council's Building Acts, if he ever can fathom it.

I do not mean to suggest that an architect should be so complete a lawyer as to be competent to advise his employers in any intricate legal question arising through building operations—that would be neither advisable nor safe—but I do mean that he should have such an acquaintance with these matters as to recognise the obligation of attention to points in his schemes, plans, and advice to his employers affected thereby; otherwise his ignorance or neglect may involve his employers, who should be his best friends, in serious difficulties and pecuniary loss. In the course of an architect's varied practice many of these questions are sure to crop up, and woe betide him if he has disregarded them, though to know them all may be the work of a lifetime.

There must also be a knowledge of the latest scientific inventions affecting building, of construction in all its details; materials, accounts, and the values of materials and labour. But apart from all the practical matters, and to turn to the artistic side, a wide appreciation of the beautiful in all styles of architecture is necessary for the enlargement of the views, and to open the eyes as to what architecture in its highest aspirations really means.

My old friend and master, the late William Burges, used to point out to his pupils the necessity of knowing how to learn—the time saved by a knowledge of what was best to study—and he emphatically declaimed against the waste of time involved in making many pretty sketches rather than a few careful measured drawings of good examples.

A pretty sketch may show a certain effect; but, without dissection of the building sketched, how that effect is obtained can no more be understood than the working of the human frame without the study of anatomy. Burges also had a maxim—that in art the thing that looks well is well. There is manifestly great truth in this. The false, either in architecture, painting, sculpture, music, or literature, neither looks well, sounds well, nor reads well. And this is discernible to the cultivated eye and ear in regard to these, in the same measure that the false ring about a double-minded person is instinctively perceptible to the honest and truthful soul. All these points suggested infinite food for reflection to us, and it could not do students any harm to consider them now.

The practice of architecture should not mean to those adopting it just a means of livelihood, and consequently the obtaining of clients as the first consideration (no matter by what means), and the giving the least possible value in the shape of brain work with smallest trouble in return for their remuneration. Were this the idea, bad builders might be evolved, but never good architects.

It should mean the putting of selfish ends on one side for the sake of the art, with a determination that no personal consideration shall weigh in the balance, providing in the best manner for our employer's wants at any amount of self-sacrifice, and building for them in truth and beauty, to the utmost that may be in the capacity of the architect. If you do not quite grasp the full meaning of this, you cannot do better than study the works of our late Honorary Fellow, Mr. John Ruskin, whose death we are lamenting, and more particularly his "Seven Lamps of Architecture," which include the Lamp of Truth. All that he says need not necessarily be taken for granted, but all is worthy of the deepest reflection.

Further, it should also mean, building not just for the present, but for the future, works that may last, and of such a class that future generations may form a high, and not a low, opinion of what we are as a nation. To arrive at this altruistic level of work means an exalted feeling of the value to others of beautiful architecture, and the worth to the world of honest hard work.

There are several things most necessary for the student who has such high aims. First, there must be diligent study. Second, there must be the power of drawing. Third, there must be enthusiasm. And with all these there must be combined a high ideal of the responsibilities of the architect. Then, granted that you possess all these gifts, if you have not the *spirit* of architecture, you had much better leave it entirely alone; for if under the circumstances architecture paid you, you would derive no sort of satisfaction from it but the monetary one, and that can be obtained with less exhaustive labour, in inferior occupations.

But with regard to study, and how and what to study—and I am alluding now to the art side of architecture, not to the practical—in the latter the courses of study necessary for passing in the subjects of our examinations are known to you all. They form the foundation on which your art must be erected, and without which practical knowledge the art side is well-nigh useless. But besides these practical courses of study, all the subjects which a cultivated gentleman should have an acquaintance with, including classics, ancient and modern history, and literature, are equally necessary to educate the taste, to assist the imagination, and properly to comprehend the evolution of architecture. That all these are needed is clear when you reflect that all that can be constructed, from large architectural or engineering structures down to goldsmith's work and embroidery, legitimately comes within the province of the architect. All engineering works, bridges or otherwise, are the better for the architectural element being combined with them, and all architecture comprises some amount of engineering; neither can afford to ignore the other. Also embroidery necessitates knowledge of form and design. This then means a vast range of study for the student. But with regard to the study of architecture proper: It is well to begin by carefully examining any one style that attracts you, and to study it thoroughly from its commencement to its end—if you can find either. In reality you will discover, if you have any real zest in the work, that to find any beginning or any end, you will be forced into the comparative analysis of all styles. If you do not consider Greek work you will not understand Roman; if you ignore Roman, half the meaning of Romanesque and Byzantine will be an enigma to you. Unless you have studied all these thoughtfully you will really know but little. For instance, you would not understand how such a thing came about (though of no great importance) that the classic entablature should have developed—or shall I say have been compressed?—into the Gothic abacus; also, without comparing Mahommedan work with Gothic, many of the possibilities of the pointed arch would be unappreciated; and if the differences in the treatments of the Oriental and Classic or Italian domes have not been considered, you will miss seeing the potentialities of the dome or what might be done with it if you ever have the chance. And the origin of hybrid or deduced examples of architecture can only be understood by a knowledge of the purer styles from which they are departures.

Therefore study all styles of architecture, and without prejudice. On one occasion, some years ago, I had been showing a younger architect some photographs of magnificent work in India. He looked at them listlessly, and then said, "Well, of course, we cannot feel any interest in Indian things after having seen the glorious Early French architecture in Normandy." If a mind is so cramped as that, and there is the latent idea that all perfection of architecture may be found either in a Greek, Early French, fourteenth century English, Jacobean, or a bastard Queen Anne, Georgian, or any other style, there would seem no redemption for so small a soul, unless perchance a change to thoughtful study and intelligent travel might compass it. There is nothing more contracting to the individual's mind than existence in a small circle only, and nothing more cramps perception than imagining perfection to exist in one direction only.

Therefore the best of the various styles and their purest examples should be the subjects of the first most careful study, reflection, and comparison by the student. The finest works in architecture are those which have perfectly suited the circumstances of the age and nation for which they were erected, were well and honestly constructed, stately and beautiful in proportion and detail, and truthful in the expressions of their purpose. And the best examples are those which are the purest, whether in Greek, Roman, Gothic, Renaissance, or any other period. In examining hybrid or deduced styles much of picturesqueness and interest is frequently found, but there is generally a something lacking of the greater elements of the finest architecture, either in simplicity and breadth, monumental grandeur, or truth, which jars on the most cultivated and refined taste. In this, however, architecture only expresses something of humanity; the perfectly pure human would be somewhat above this world: so with our mundane needs, the absolute purist in architecture would find he could not altogether comply with modern requirements. Nevertheless I reiterate that the purest examples of architecture are the most worthy of careful drawing and measuring by the student. Occasional eccentricities of detail sometimes perhaps, when even a trifle bizarre, lend now and again interest to the general harmony of a design, as a discordant note may give point to a passage in music; they are incidents which may be interesting and quite worthy of sketching, but as details or points of accentuation only, not as precedents with a view to give a general character or eccentricity to a design. I note this point because of late years debased or eccentric detail seems to have pleased the public taste, as well as that of architects, and appears to pass for style. It should be remembered that it is infinitely more difficult to design thoughtfully and effectively with simplicity and breadth of treatment, than to endeavour to hide artistic incapacity by an elaborate clothing of ill-adapted ornament, or by an affectation of originality of thought, or eccentricity of form, to attract the attention of an unthinking crowd. So the first suggestion I make to you is, study most the best and purest examples of all styles of architecture.

Some time ago the one thing most prominently urged upon students of architecture was the paramount necessity for draughtsmanship, drawing first, drawing second, and drawing last. This resulted in much good, and draughtsmanship has now been brought by many of you to a high pitch of excellence; but also, I think, some harm has resulted. Too great value seems occasionally attached to the effect, technique, and execution of the drawing itself; and the quality of the architecture, a far greater thing, is sometimes apparently considered of secondary importance. This is

entirely wrong. The effect of architecture certainly cannot be shown without good drawing, but draughtsmanship, however excellent, cannot make inferior architecture good. William Burges used to say there was only one man in whose architectural perspectives he could really understand the details, and that man was Axel Hermann Haig. Of late, however, many of our younger architects have done splendid work. Nevertheless occasionally, on looking at the numerous clever sketches made, something of the same feeling strikes me even now.

A good general effect of chiaroscuro is given; little touches of shadow are put in effectively, and impossible high lights and unnatural broken lines are introduced, mainly with a view to make a picturesque and pretty drawing, and not truthfully to represent the design. It thus becomes inferior artists' work, and does not represent the architecture. Often not much more detail can be made out than, perhaps, that it is Renaissance or Gothic in character, and that the windows have square or arched heads, either circular or pointed in shape. But on examining one of Haig's drawings, say of Chartres Cathedral, there are also grand and picturesque and pictorial effects of chiaroscuro, but the high lights and shadows are true. Details are shown by clearly-defined drawing, and mouldings are so accurately suggested as to be almost as plainly read as in a working drawing, whilst the statues are absolute portraits. As architecture is largely composed of details, if a drawing slurs them over, and is indefinite, its vitality is, in a great measure, lost, and its utility sacrificed, if intended for an architectural drawing; and it becomes merely a picturesque sketch, of value simply in relation to its artistic quality and technique as such, not as a study of architecture. The French understand this, and therefore their drawings of architecture are much more academic than ours.

I think our style of drawing is defective in many ways. French drawings give by clean lines and properly cast shadows a fairly truthful impression of the detail, relief, and projections of a building. By our method shadows are sketched in merely with a view to look pleasing on paper, and frequently convey a false effect of the cornices and other salient features.

Some years ago designs were mainly shown by coloured perspectives; then it was said they were so faked up by the artists that they were quite untrue representations of the designs. Consequently pen-and-ink drawings became the fashion. Messrs. Street & Shaw were the first and most conspicuous representatives of this style, and coloured architectural perspectives have practically disappeared.

But, I would ask, what can be more untruthful and misleading than a black and white line drawing of a building constructed of several differently coloured materials? A monotone design, no doubt, can be well shown this way, but it is not evident how misleading an etched drawing may be in representing, for instance, a design in red bricks and white stone. In the black and white it may look charming, yet when erected prove a most restless composition, owing to the spots, blotches, and streaks of white stone sprinkled all over its surface. Now this effect in a tinted elevation or coloured perspective would at once be apparent; in the black and white it is unnoticed, and when the building is erected it possibly disappoints the owner and the architect also. No doubt the reproduction by the journals has much to do with this matter. Colour does not easily photograph, whereas black and white comes out most satisfactorily. Pretty sketching is very seductive and of infinite use, but it sometimes leads to a distaste for the labour of making careful measured drawings, truly a tedious business, but without which no really useful knowledge of how details cause effects can be obtained.

My second word to you this evening is, therefore, learn to draw accurately and definitely, as many of you already do excellently well, but do not neglect to supplement it by careful dissection and measurements. Also study the human figure, for more than all else that instils a fine sense of proportion. But, above all, do not let sketching run away with you, or mistake drawing for architecture; it is not; but simply a means to an end, and bears the same relation to it that an alphabet bears to a language.

The third essential I would put before you as imperative to the successful accomplishment of noble architecture is an unlimited enthusiasm. If your work is to be worth anything at all there must be such an enthusiastic love for it that self and selfish considerations sink altogether into the background. Enthusiasm, derived from the Greek *ἐνθουσιασμός*, signifies "a God-inspiring zeal." If you look towards the sun your own shadow is unseen, being cast behind you; so if your mind's aspirations are steadfast towards a lofty ideal, through your entire possession by this God-inspiring zeal, there will be complete unconsciousness of self in respect to your art.

And this is most important, for then the inspired desire will be simply to do the most perfect work according to your light, for the sake of art alone; other considerations will be only incidental to it, and eccentricities with the view of attracting attention to yourself, or of notoriety, will find no place in your designs, and your work will live. This inspiration is manifest in the best and purest of all old examples of architecture, and proved by the history of the lives of some of the architects. For instance, how great must have been the zeal of Michelangelo to urge him on with his work amidst intrigues, jealousies, monetary difficulties, and family worries and disappointments.

If it were needful for the attainment of noble work in the simpler olden times, how very much more must it be indispensable to carry a modern architect through the arduous labour necessary for the production of one of the complicated buildings of the present time, with its manifold requirements, and to sustain a young man through the toil at high pressure, the anxieties of business, and the many certain and vexatious disappointments which meet every architect in these dreadful days of competition, and indeed most other persons, on their way through life, whatever that way may be.

Further, it is all very well to fancy, as some appear to do, that architecture as a fine art is altogether apart from, and above, the sphere of such practical matters as drainage, heating and ventilating, electricity, hydraulic power, gas and water supplies, and such like. Granted that it is on a higher level, nevertheless there is no important edifice, public or private, erected now to which these things are not vital; it has been well said they are the very nerves of the structure. If any building is properly to answer to its requirements it must be not only artistic, but also scientific.

The scientific details require consideration by the architect from the very commencement of the inception of his scheme. Their introduction affects not only the plan but the design, and even details; and the ignoring of them or leaving them entirely to specialists to fit in as best they can in an imperfectly thought-out arrangement increases the cost, often spoils the building, causes inefficiency in future working, and vexes and irritates the employer.

But to grasp all these necessary and important details implies the thoughtful use of every talent with which you have been endowed, and an infinite capacity for painstaking; and in neglecting these things for the absorbing interest of the art side of the profession, the architect, as well as any other person who does not use necessary foresight in all details of his profession, no matter what his business may be, is not doing his duty either to God, or his neighbour, or his country.

Because these things are surrounded by practical difficulties, are troublesome and not particularly interesting, to lose heart or interest in the work and let them take their chance is an easy but downward course. The architect who does so is lacking in a sense of responsibility; but on such, a sure and certain Nemesis waits. Let noble architecture be your first consideration, but practical use should follow closely in the wake. It is enthusiasm which alone will ensure the architect's retaining the love of his art and a lofty ideal amidst these practical difficulties and immense responsibilities inseparable from his profession, and that will enable him to do his duty not only by his employer but by the nation. Therefore I say, foster enthusiasm and guard its door, for from it are the issues of the life of your art. An architect is not acting squarely by his country if he puts up hideous eyesores, or insanitary or inconvenient buildings. It should never be forgotten that, if our buildings last, on the architects, almost more than on any other workers, will depend what verdict may be passed in the future on the character, artistic taste, culture, intellect, and nobility of the British Empire of the time—whether we shall be reckoned by posterity as having been one of the greatest nations the world has seen, or as a small-minded, sordid, uncultured, and superficial race. For these are exemplified by our architecture.

But one can only endeavour to act honestly and zealously according to one's capacities; every one is not gifted with the highest talents, nor can all expect to be Michelangelos or Giulio Romanos. Therefore never let failure damp your ardour; it is the best general who makes the fewest mistakes, but all must make them at times, so be not disheartened by errors or inexperience; only let them spur you on to further and nobler effort.

The true architect must ever aim at the highest ideal, if his work is to live, and with the greater knowledge and means of learning in this enlightened age it is possibly within the power of some gifted ones approximately to attain in some instances to their ideal. Be careful, therefore, what your ideal is. It should ever be beyond your best efforts. As Browning says—

> A man's reach should exceed his grasp,
> Or what's Heaven for?

As architects, the uttermost powers you possess should be exerted for your art; they are not given to do what you like with, but to use for the benefit of others, in everything, however small, and even though the work be not what you may consider sufficiently interesting to call for the highest endeavour. You cannot be waiting always for a great opportunity to exert yourselves. I came across the following words the other day, which I will leave with you as worthy of thought, for without some such sense of moral responsibility as is implied in them your work in life as architects or men will be deficient in quality:—"Our task in this life is to employ to the uttermost that human faculty, that human talent which has been given to us, and not to let it wait for some exceptional moment in which we shall probably never find ourselves, or we may die without ever knowing or dreaming what lies in the capacity of every one of us to be, to dare, or to do."

Review of Works submitted for Prizes and Studentships, 1900.

Mr. G. F. Bodley, A.R.A., then read the following remarks:—

"Mr. President and Gentlemen,—I hope I shall be pardoned if I do not to-night dwell at much length on particulur designs or on particular drawings that were exhibited in the neighbouring rooms.

It seems to me that what little time we have to-night will be best spent if I offer you some few remarks on the general principles that appear to have guided architects in the great days of our art. For these remarks will be addressed to the students of this our Institute. Not, however, but that we are, or ought to be, all learners, as has often been said.

First, let me say to you, students, whose work has been recently seen by us, and, I hope, visited by many, that I was scarcely prepared for the treat I had in looking through your various and beautiful delineations of ancient work—work that brought back many pleasant old days before one—days of one's travels in Italy and other Continental countries, and lastly, but not the least enjoyable, in Old England, with her beautiful and noble churches and her many delightful and stately old houses.

What days of enthusiastic and profitable enjoyment were brought back to one by the remembrance of the times that one spent in the presence of architectural works that commanded one's utter respect and admiration—days spent in solitary meditation or in company with old friends, now passed away, while the enduring works remain! Well, students, we must pass on to the mention of some of the exhibits that your year's work has given to us—though I shall do so rapidly and slightly, the rather to pass on and offer some remarks on the principles that, I think, should animate our designs.

Let me take the drawings sent in for the Owen Jones studentship first. Five were submitted. The prize has been won by Mr. Geo. A. Paterson, and medals of merit given to Messrs. J. B. Fulton and to J. Hervey Rutherford. Besides these Mr. Cummings and Mr. Greenslade sent specimens of their work, which I admired. They are careful drawings of well-selected specimens—some, no doubt, of finer quality than others, but all of them instructive for decorative work of this kind. Now, this Owen Jones prize is an important and useful one. I am glad that so many of you went in

for it; more, I believe, than in other years. The whole art of colour is a most interesting one. Think how Nature teaches it everywhere. The pale blue sky and the fuller tint of the far blue hill—the thousand tints of green of the grass, and the trees and the foreground, jewelled with flowers, as if with sapphires and pearls. In all the great days of our art colour played an important part. The Greeks stained their white marble, and touched it with azure and gold. Mediæval work, as we have seen in the many examples you have given us, was full of colour. Colour is, indeed, one of the fairest of the handmaids of architecture.

To recur to Nature, have you ever observed how she contends with ugly colour, subdues it, for it always conquers and sets it right? It is a standing miracle!

Naturally many of these drawings are copies of the painting that remains on Norfolk and Suffolk wood work, on the screens and the roofs there, for there was a great school of decorative painting in that part of England. It was derived, in great measure, from Flemish work. Now, in these eastern counties there seems to have been two schools of painters — the one quite English and the other deriving its inspiration from Flanders. The latter came from the land that produced Memling and Van Eyck. Sometimes, no doubt, crude in drawing, and without much beauty in the faces, this great Flemish school was delightful in colour—richer, indeed, in that respect than Italian work with all its refinement and grace of expression. Such old work is rapidly fading away and perishing, and much has been ruthlessly destroyed. I hope that such drawings as you have given us may stay something of the beauty of old work as examples for us. All architectural students should study colour and learn its harmonies, as you would those of music. Though all of us may not have a sensitive eye for colour, yet a good deal may be learnt.

As architects you should know the tints of all the marbles that can be got nowadays, and learn to arrange them on shafts and friezes and pavements harmoniously, or in agreeable contrast. It should be all done with breadth of effect, for that is essential for such work.

Next, I would speak of the drawings submitted for the Pugin studentship. Naturally Gothic architecture of our own country has been selected for delineation. Mr. James M'Lachlan has the first prize. Mr. E. W. Turner and Mr. A. Woore take "Medals of Merit." Mr. M'Lachlan's drawings are excellent. His drawing of the vaulting of the choir at Christ Church, Oxford, is most able, and that also of the shrine of Edward II. Mr. E. W. Turner's drawings of Peterborough Cathedral are very painstaking and good. Mr. Forbes, Mr. Raine, and Mr. Pearson have done well. I do not think it is of much or any use criticising drawings—as such. No doubt some surpass others in draughtsmanship, and some select their subjects more wisely than others. But the very merits of the old work seem to withdraw criticism and to silence the critic. This is not a drawing school. It is one for the study of architecture in all its many phases. And here one word as to drawing. I must remind you that, useful and interesting as is that art, it is not design. They drew but poorly in days when they built magnificently. As architects, when you love to design, you must set your heart on your building, not on your drawing.

Your building is to be for all time, your drawing but the thing of a day. And here let me advise you, when you get your first opportunity of designing a building, to shut your eyes, and, with your mind's eye, call up the vision of the edifice as entire, and as complete, as it will stand. Not only the mass but every detail must be there visible—perfectly visible to your mental vision. Then, with eager hand, careless of how your drawing looks, put your perception on paper part by part and detail by detail. You will know instinctively what each moulding should be, what each capital. You have seen the building; it has stamped itself upon your imagination. Here and there you may suppress an idea, or control a thought, finding it is not wanted, or, if used, it may jar with the conception of your mind. But this seeing the whole building, complete and entire, is what you must do. Of course, you will have had to acquaint yourself before this with all the requirements and the possibilities—the site, the surroundings, and the materials you have to use. Then, having informed yourself on these necessary details, it is for you to create that vision that I have spoken of—that building in which every single detail, as well as its proportion, its colour, its feeling, has been present with you. The man who can thus conjure up his vision and make it his own is the powerful architect.

Yes! But what if that power is not controlled by principles of beauty—of a harmony with Nature of breadth and unity of effort—of dignity and of truth? There are architects among us who have a power of the kind I mean. It cannot be denied. They stamp a character, an animus on all they do. It is evidently their work. But, alas! alas! is that character one of beauty, of refinement? Is it consonant with the suavity of Nature? Is there restraint and reserve? I fear in many cases few, perhaps none of these qualities, but only no refinement. Now this reserve is a great quality, but it has its dangers too. With this restraint do not neglect beauty. Do not belong to that school the members of which almost seem to worship the ugly. Put aside all vulgar display, but imbue your building to your utmost, and as far as you can, with refined beauty and restrained power. Little and infrequent touches of beauty, if they must be few, grafted, as it were, on to a well proportioned fabric, will give a building a tender grace, and it will be a delight to all passers-by. Be not afraid of beauty and richness when you can get it. Did the civilised ancients worship the ugly? Uncivilised barbarians may have done so; but it is not for Christians, whose Master said, 'Consider the lilies of the field' in their arrayed beauty, to be worshippers of the ugly. Pardon me for dwelling thus long on this point. I think it is a real danger. For some seem to mistake sterility for simplicity, and gracelessness for grandeur. Let your manner be as graceful as your expression is sincere. When you have opportunity imbue your building with a poetry of its own. That can be done even in the simplest work. In great ones you can endow them with a poetry that may be Miltonic. How delightful is the expression, alike of the simplest old stone-mullioned and stone-roofed house and the stately Elizabethan mansion! How courteous alike the Northamptonshire and Oxfordshire cottage by the roadside, and Hardwick, and Burleigh, and Kirby Hall, and Haddon in their parks.

With regard to the designs for the Tite certificate, I am disposed to be more critical than I have been. There we have a somewhat unusual idea, for towers are not usually isolated. But let that pass. I fear I miss in most of these designs that indescribable charm, that picturesque feeling that one sees in so much old work. I had not time to examine them very carefully. I am rather doubtful about the effect of most of them if they should ever be carried out. They struck me as wanting more ideas and greater consideration, and more freedom of design. The design marked 'Sphinx' has a good idea in its sort of embryo pilasters at the corners; somewhat original, I think; and I can conceive their giving a suggestion of a refined concave shape to the tower that would be pleasing. Mr. Percy Nobbs's sombre perspective does not do justice to his design, which looks better on his elevation. It no doubt has merit.

I was a good deal interested in the design for a spiral staircase. Mr. C. E. Varndell's design is able and carefully delineated, and I was pleased with the late Gothic design bearing the motto 'Tiny,' and consider it good.

In the 'measured drawings' I am glad that Mr. James B. Fulton's drawings of St. John's College, Oxford, are awarded the silver medal. They are very good drawings of a most interesting place. The garden front, built, I believe, by Archbishop Laud, has a wonderful repose, thoroughly collegiate in character. Mr. H. Inigo Triggs's drawings of Raynham Hall are good. It is very instructive to a young man thus carefully to study, measure, and delineate a whole house that has, like this one, character and interest. It would be a good example to follow in other years. Old houses get so altered, and frequently are burnt down, that it is a satisfaction to see them drawn out to scale.

The Soane Medallion.—Here I must repeat something of what I have said in regard to the 'Tite prize.' I cannot but feel that something better might have been done. Mr. Power's drawings are very good. I should criticise the outline of his dome. I thought the design by 'Pomegranate' was broad and simple in its treatment, and would be effective if built. I suppose the competitors were rather tied as to style. . . ."

Mr. Bodley here made some extracts from a Paper read before the students of the Royal Academy in 1885, and said in conclusion:—

"If, students of this Institute, I have in any small degree raised your enthusiasm for your art, these few words may not have been all in vain. You are entering a delightful profession. Make it more and more not only a professional business but a real living art. Remember, architecture should be the queen of all the arts."

Sir James Linton said it was a pleasing duty he had to perform in proposing a warm and sincere vote of thanks to the President and to Mr. Bodley for the extremely able addresses which had been delivered. He spoke as a member of one branch of art, but all that the President and Mr. Bodley had said appealed to the painter in its broad and simple principles quite as much as to the architect.

Mr. Axel Haig briefly seconded, and the motion was heartily agreed to.

The President then presented to successful students the prizes and certificates gained in the recent competitions. For the names of the prize-winners, see our issue for January 27, p. 77.

It was announced that the next meeting will be held on the 19th inst., when M. Ch. Lucas will read a paper on "The Buildings of the French Exhibition, 1900." The Chairman remarked that M. Lucas was one of the most energetic hon. corresponding members of the Institute, and he hoped there would be a good attendance on that occasion.

The meeting then terminated.

COMPETITIONS.

BOARD SCHOOLS, PAISLEY.—At a recent meeting of the Burgh School Board, Mr. Watson, architect, and Mr. Mathieson, measurer, submitted their reports on the competitive plans lodged for the new school at Renfrew-road. The architect reported that he was of opinion that the design under the motto of "Economy," should be placed first. A discussion ensued and it was ultimately agreed not to accept any of the plans lodged.

POLICE CONVALESCENT HOME, HARROGATE.—The result of the competition for plans for the proposed new Police Convalescent Home, Harrogate, is as follows:—1. Mr. H. S. Chorley (Messrs. Chorley & Connon), 15, Park-row, Leeds. 2. Mr. Edward C. H. Maidman, 13, South Charlotte-street, Edinburgh. 3. Messrs. Chorley & Connon, 15, Park-row, Leeds. Mr. H. S. Chorley has been appointed architect.

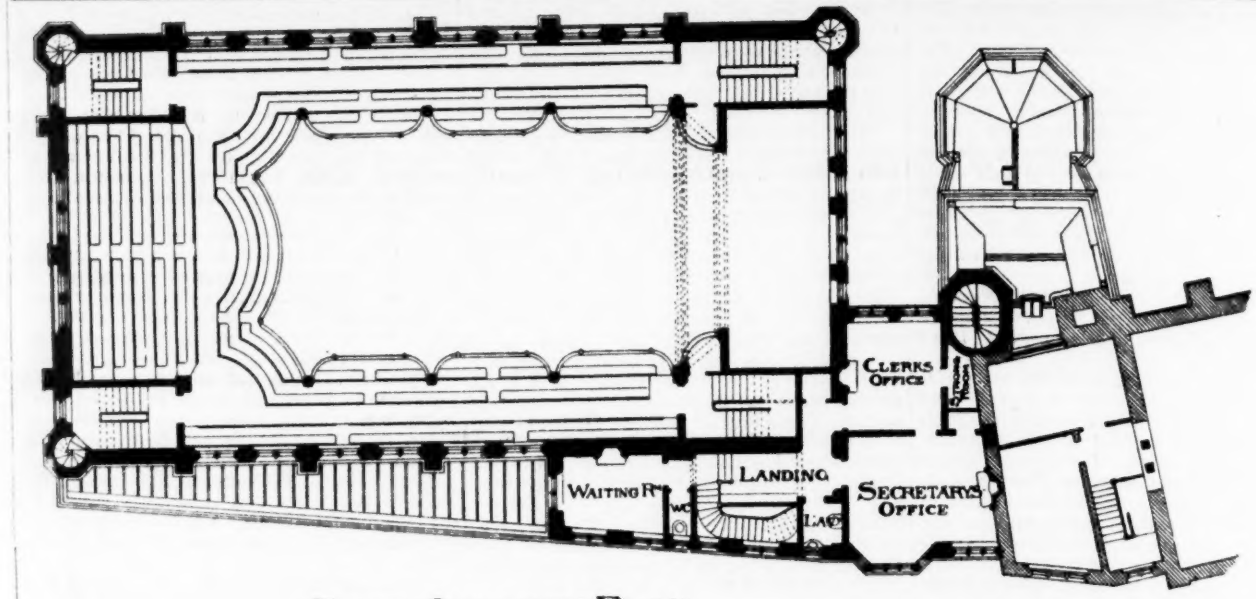
ARCHITECTURAL SOCIETIES.

ARCHITECTURAL ASSOCIATION OF IRELAND.—An ordinary meeting of this Association was held at the Grosvenor Hotel, Dublin, on Tuesday, February 6, when Mr. John Todd Rea read a paper on "Building in the West Indies." Some very fine views of various houses in St. Lucia were shown. The annual dinner of the Association is to be held this year in Dublin, instead of, as in former years, on the Excursion. It will take place on Tuesday, February 13, at the Royal Hibernian Hotel at 7 o'clock.

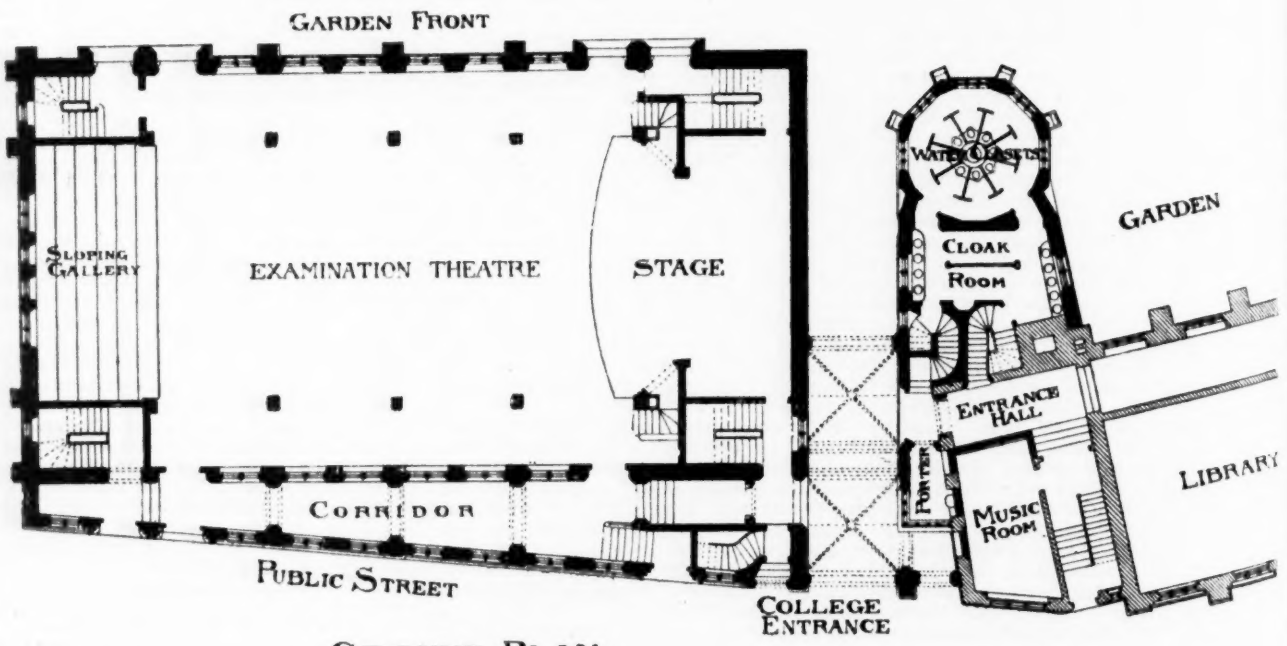
ARCHÆOLOGICAL SOCIETIES.

BRITISH ARCHÆOLOGICAL ASSOCIATION.—The fifth meeting of the session was held at the rooms in Sackville-street, Piccadilly, on the 31st ult., Mr. C. H. Compton, V.P., presiding. A paper was read by Mrs. Day upon the "Life and Portrait of Robert Holgate, fifty-ninth Archbishop of York," which was illustrated by a fine engraving by James Stow, at the end of the last century, from the portrait in oils of the archbishop, still to be seen in the governor's room of the hospital, which he founded at Hemsworth, near Pontefract, and by several photographs and sketches. The paper was compiled from original MSS. and documents placed in the writer's hands during the past summer. It was, however, rather historical than archæological in the usually accepted sense.

CO-OPERATIVE PREMISES, CREWE.—A hall capable of seating a thousand persons, and a suite of club-rooms, &c., for the Crewe Co-operative Society, in Market-street, were opened on the 3rd inst. The new buildings were erected by Mr. A. P. Cotterill, from designs by Mr. G. E. Bolshaw, architect, of Southport, at a cost of about 14,000*l.*



FIRST GALLERY PLAN



GROUND PLAN

Examination Theatre, Ladies' College, Cheltenham.

Illustrations.

THE LADIES' COLLEGE, CHELTENHAM.

ALTHOUGH originally started in 1854, the great development of the Ladies' College at Cheltenham really dates from the year 1858, when, with sixty pupils, it came under the control of Miss Dorothea Beale, the present Lady-Principal, soon after which new buildings had to be thought of.

In the interval of forty-two years the pupils of all ages, have increased till their number verges upon 900, and the college is probably now the largest and most successful organisation in the world for the training and education of girls. It has also arrangements, separately, for the training of the teachers themselves.

The buildings first erected were in the style of "Gothic" which obtained forty years ago. Additions have been subsequently made at intervals by different hands, which, although all ranking under the same general head, present, to an architect's eye, a somewhat incongruous, if interesting, whole.

Till the summer of 1895, none of the successive enlargements had aimed at giving a more definite collegiate expression to the buildings, nor even at providing a clearly-defined main entrance.

When the old dilapidated Cheltenham Theatre, which immediately adjoined, became the property of the College, certain unextinguished rights of way had to be dealt with, and the scheme of providing a more important entrance as well as the desired theatre and examination-hall, lent its influence to the plan of the additions shown in our illustration. At the same time it was felt that the enlargements, though forming a somewhat bold departure, should architecturally be in artistic sympathy, as unavoidably in physical touch, with previous work, and should be the natural and harmonious complements to a kind of design which might be led from and supplemented, but not flatly contradicted.

This explains the external architectural aspect of the last addition. Although it represents probably the only gothic theatre in existence, its leading motive is that of the College Hall.

The building includes the theatre itself, 107 ft. by 55 ft., having two tiers of galleries, and seating an audience of 850 persons, and a stage 29 ft. deep, having sound-proof music-rooms under. It is planned to seat, in the usual Oxford manner, for examination, 200 candidates on the ground floor. The galleries and roof are constructed of steel, the whole being architecturally cased in pitch pine. Following all previous treatment in the College buildings, no plaster is used on walls, but the whole interior is lined with brick and banded with colour. The floors of corridors are of tesselated marble.

The question of acoustics was regarded as serious, and the authorities of the college consulted many of the leading singers who had sung at the Queen's Hall of the People's Palace, and in other halls by the same architect, although the roof treatment is that of an Italian coffered ceiling of elliptical shape, which could have only a general relation to the present case. A like success in regard to sound has been here secured with a flat-pitched roof-treatment based on the works of the fifteenth century. The means of support to the galleries are not omitted as in the music halls in Langham-place, and, indeed, in most of the new theatres, but columns and arches of slight proportions are used with effect.

The College entrance next the street has an oriel window over its front arch, and the entire approach is groined in stone. Over this, on the first floor, are the council room and secretaries' rooms; the next story holds the caretaker's house; the next is the clock-room; and then follows a floor for elementary astronomical work and appliances. The whole tower is crowned by a dome revolving horizontally, and having a vertical slit opening on one side, thus enabling the whole sky and any star to be observed by a telescope from horizon to zenith.

THE THEATRE, LADIES' COLLEGE, CHELTENHA

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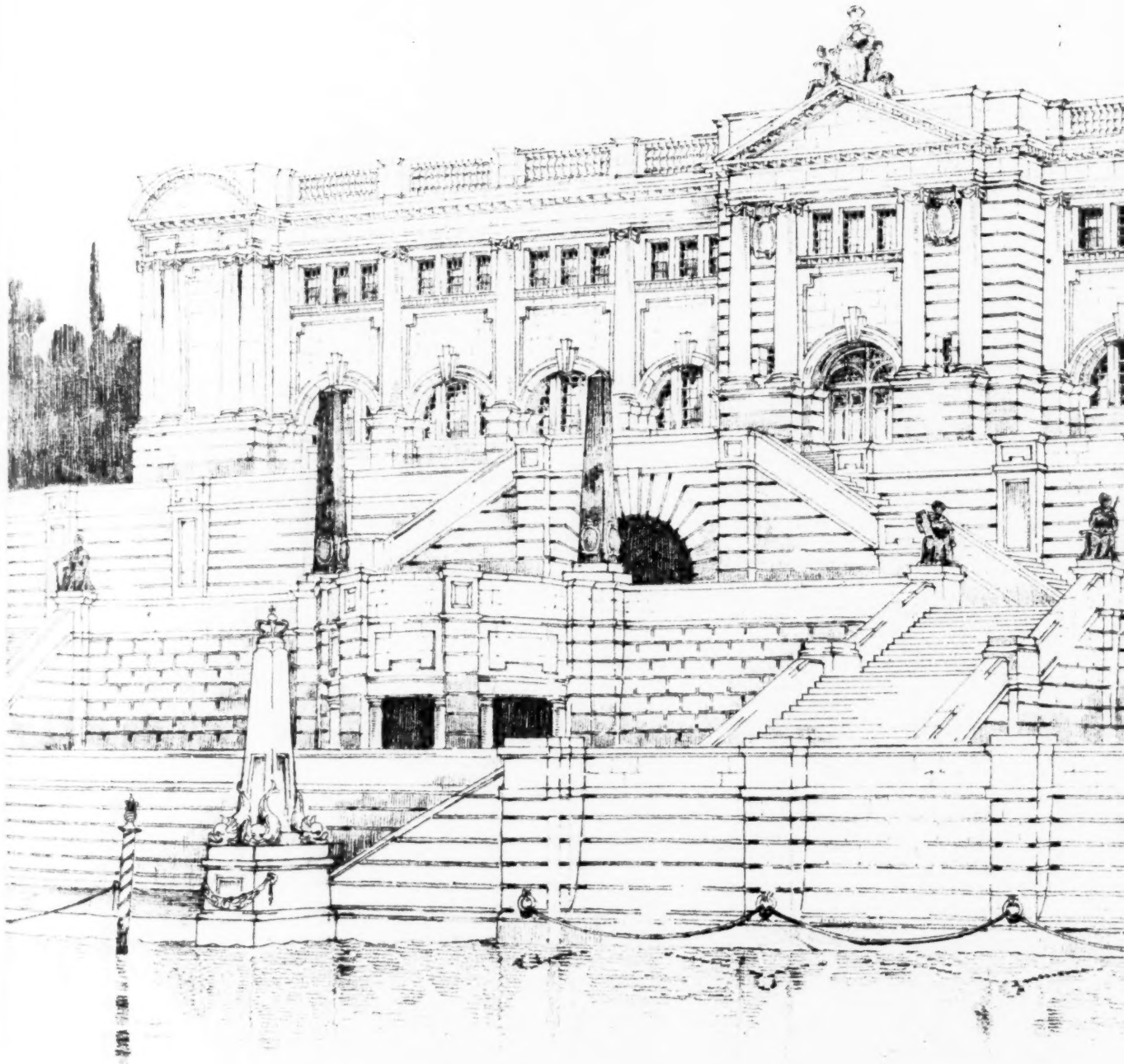
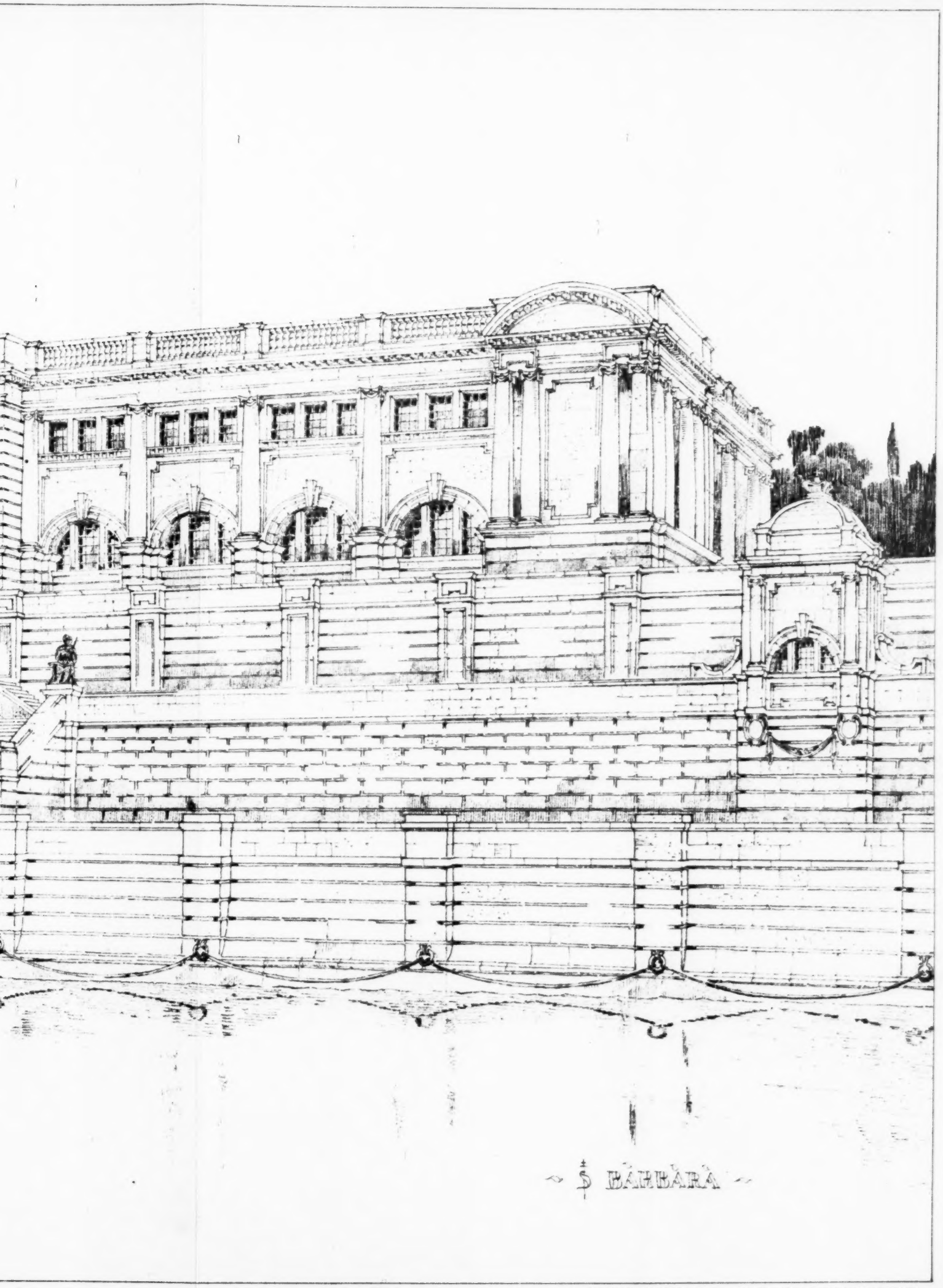
HAM... RDEN FRONT.—Mr E. R. Robson, F.R.I.B.A., Architect.

A SCHOOL OF FINE ART



PERSPECTIVE SKETCH



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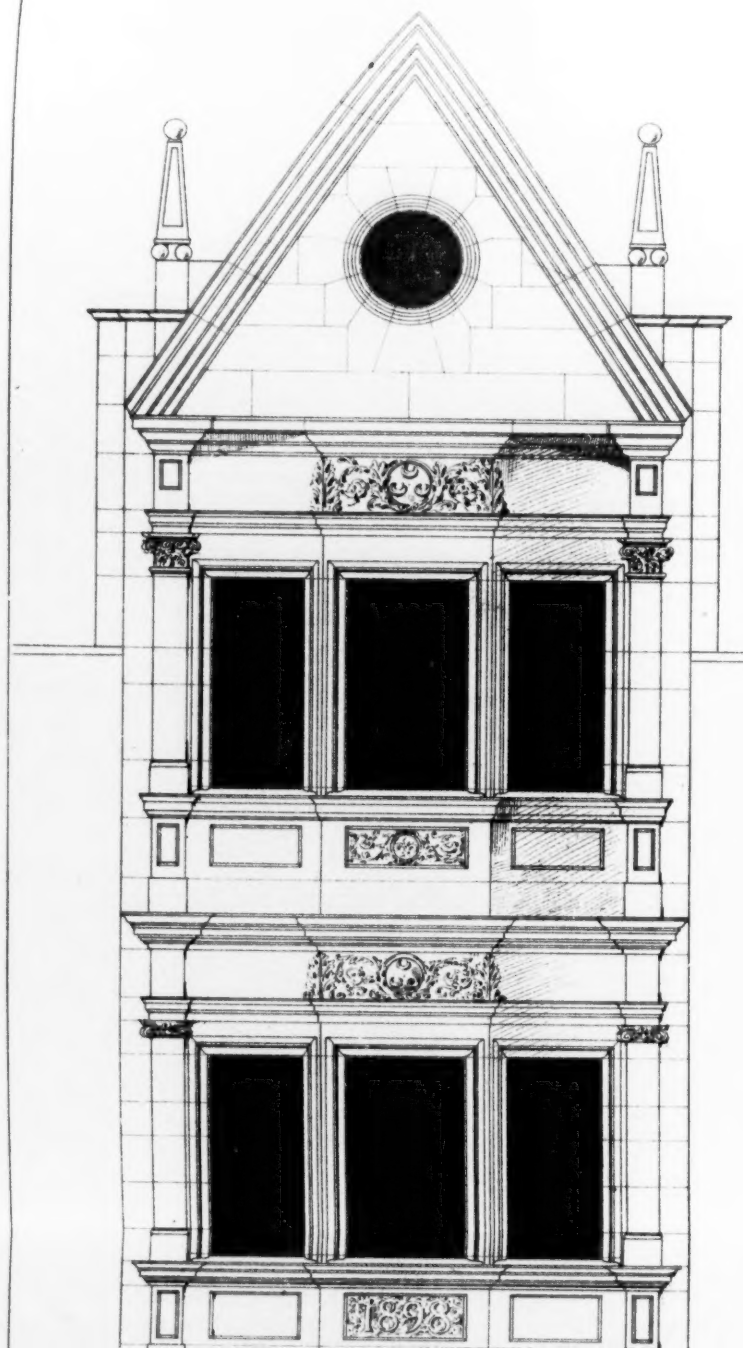
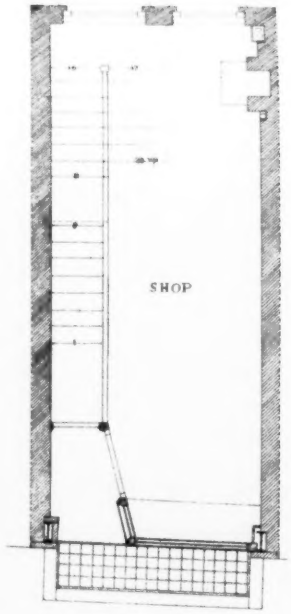
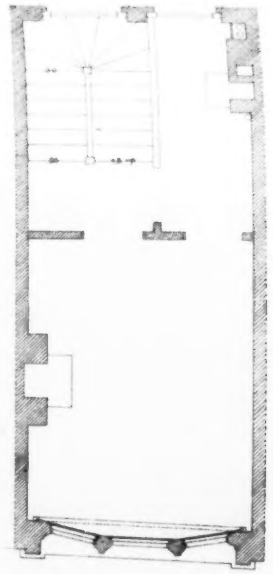
PRIZE DESIGN, 1900.—By Mr. Cyril E. Power.



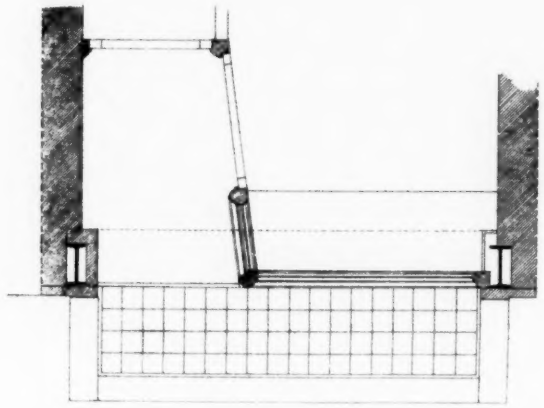


GROUND FLOOR.



1st FLOOR.

Scale of feet.



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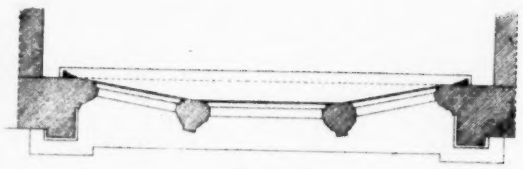

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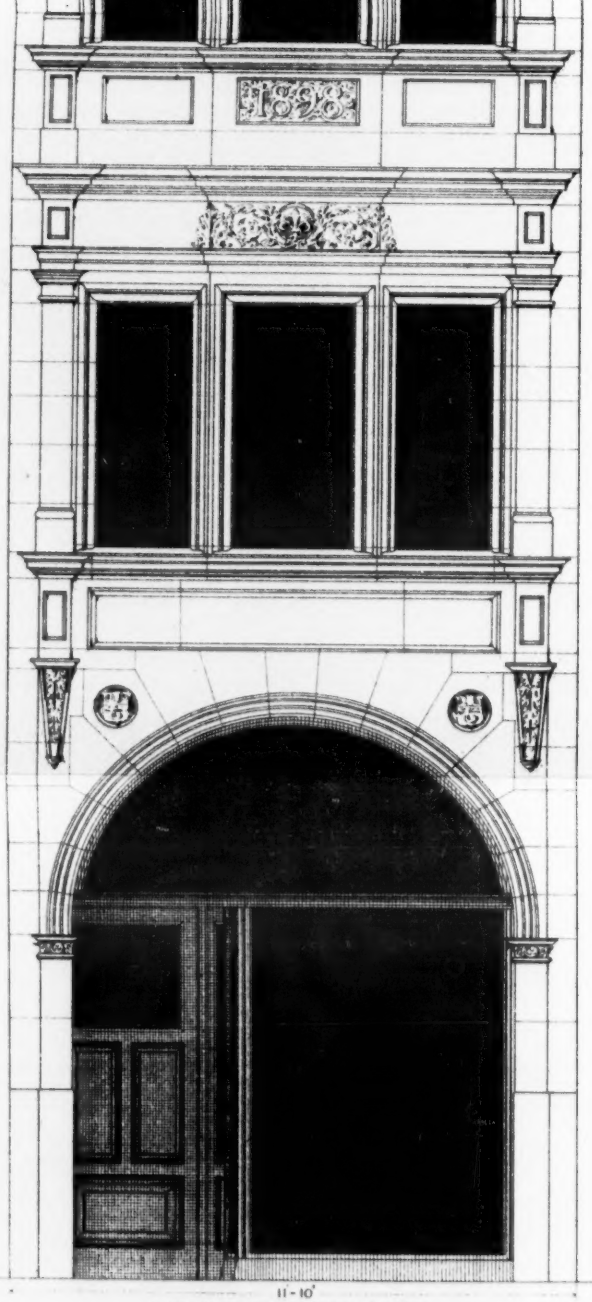

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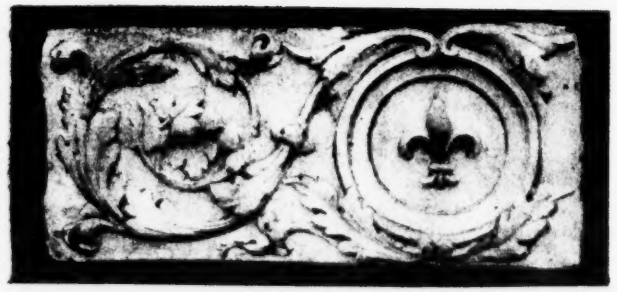
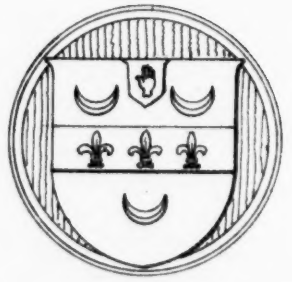


Panel 3rd Floor.



Arms in Spandril

Frieze 1st Floor.

Frieze 2nd Floor.

11-10

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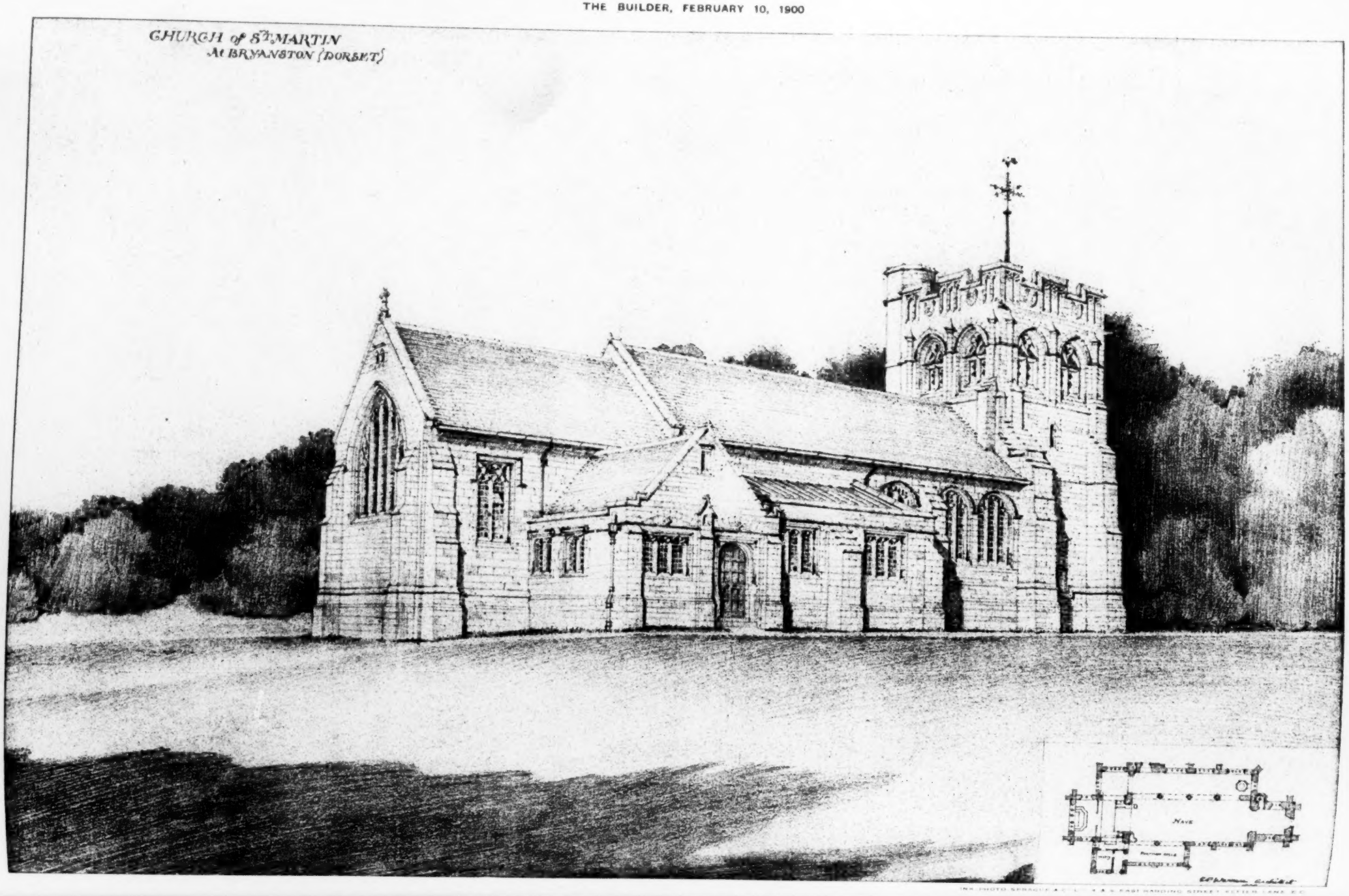
CHURCH of ST. MARTIN
At BRYANSTON (DORSET)



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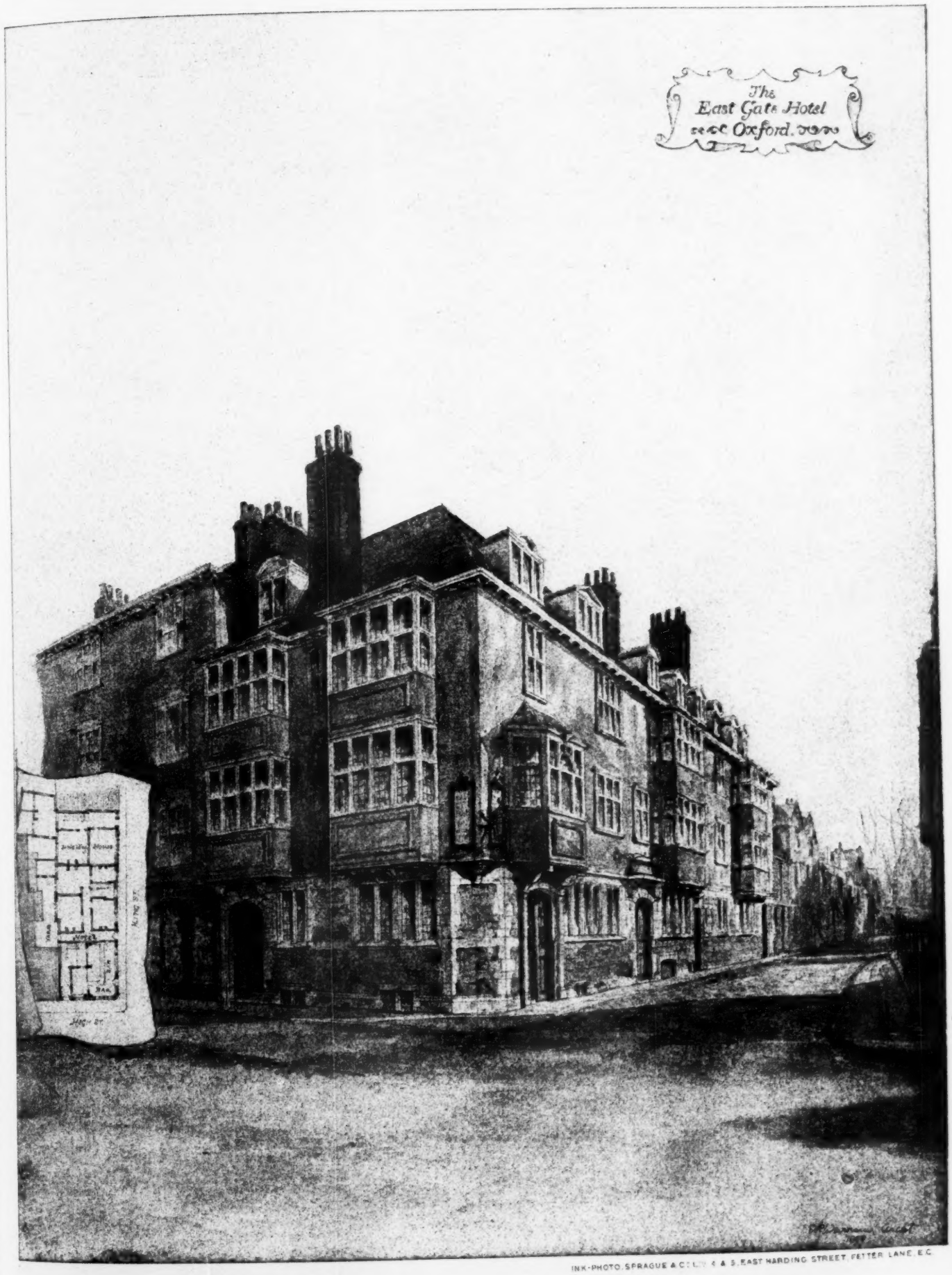

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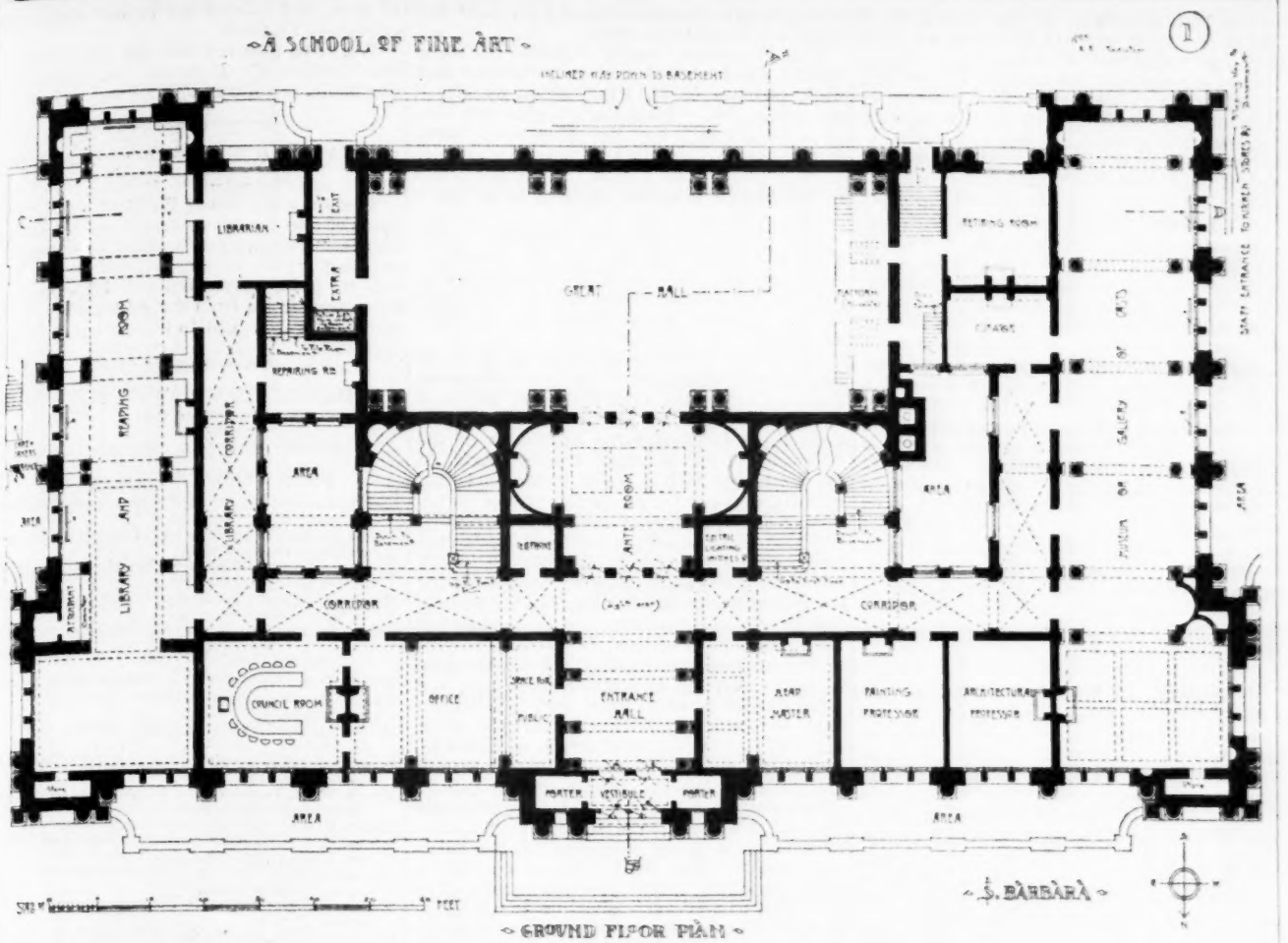


The Soane Medallion Prize Design. Ground Plan.

Bicycle store, retiring-rooms, cloak-rooms, lavatories, and latrines, are obtained of three stories in an octagonal building outside. The plan of the last will remind the architectural student of an old treatment at Southwell.

The building has been produced from the designs and under the supervision of Mr. E. R. Robson, of Westminster. The builders were Messrs. Billings, of Cheltenham, the clerk of works, Mr. Leach. The total cost, including furniture and fittings, has been about 20,000*l*.

SOANE MEDALLION DESIGN:

A SCHOOL OF FINE ART.

THIS, the winning design, submitted under the motto "S. Barbara," was prepared in accordance with the conditions and instructions issued by the Royal Institute of British Architects for this year's competition for the "Soane Medallion."

The material proposed to be used is stone for the exterior, and as the site specified was a public park it seemed fitting to place the building on a series of terraces, overlooking a lake.

CYRIL E. POWER.

FRONT, No. 233, STRAND, LONDON.

THIS building was erected by Messrs. Langdale, Hallett, & Co., builders, of London, from the drawings of Mr. T. Batterbury, architect. The front is of Portland stone.

The drawing from which the illustration is taken was exhibited in last year's Royal Academy Exhibition.

CHURCH OF ST. MARTIN, BRYANSTON, DORSET.

THIS church was completed in August, 1898, and was built for Lord Portman on a beautiful site in his park, under somewhat unusual conditions. All the stone and bricks were provided by the demolition of a large mansion which occupied a site immediately to the northward of the church. The fine oak floor-boards of the ball-room were used for the internal ceilings, and the gangways were laid with the fine paving-stones of the house.

The church is seated for about 250, and is lighted by electricity generated at a station some quarter of a mile away. The tower contains six bells by Messrs. Warner. In the east window of the chancel is some fine glass by Mr. R. Anning Bell. The builders were Messrs. Wheeler Bros., of Reading.

The old stone re-used was of three kindred varieties—Portland, Chilmark, and Tisbury. The roofs are of English oak, and those of the nave and chancel are covered with stone tiles, those of the tower and aisles with cast lead.

E. P. WARREN.

THE EAST GATE HOTEL, OXFORD.

THIS building, not yet quite completed, occupies a corner site at the junction of King-street with High-street. The walls of the ground story are faced with Brise Norton stone, those of the upper stories are coated with fine rough cast, and colour-washed cream white.

The building is on a cramped site, and necessarily small, but contains a good-sized bar, a large dining-room, a billiard-room, and twenty bed-rooms, with bath-rooms, &c. It is built for Messrs. H. & G. Simonds, of Reading, by Messrs. Benfield & Loxley, of Oxford.

The block when completed will contain a small private dwelling-house as well as the hotel. The oval bas-relief of the old East Gate, long since demolished, has been modelled by Mr. George Simonds, the sculptor, and cast in coloured cements; this is placed on the High-street front, and forms the sign of the hotel.

E. P. WARREN.

THE ROYAL ACADEMY EXHIBITION, 1900.

THE following important notice has been sent to us in regard to an alteration in the arrangements for receiving works of art at the Royal Academy for the annual exhibition:—

"The attention of artists is particularly called to the following changes in the regulations for the delivery of works intended for the annual exhibition of the Royal Academy:—

Water colours, miniatures, black and white drawings, engravings, etchings, architectural drawings, and all other works under glass, must be delivered on *Friday, March* 30. None will be received either before or after that date.

Oil paintings must be delivered on *Saturday, March* 31, and *Monday, April* 2. None will be received either before or after those dates.

Sculpture must be delivered on *Tuesday, April* 3. None will be received either before or after that date.

All works of whatever kind must be delivered at the Burlington Gardens entrance. None will be received at the Piccadilly entrance. Hours for the reception of works, 7 a.m. to 10 p.m. FRED. A. EATON, Secretary."

MAGAZINES AND REVIEWS.

In the *Art Journal* the most interesting article to architects is that on "Strathtay" by the Rev. Hugh Macmillan, with a beautiful illustration of Grandtully Castle, and of the old church at the same place, so low that the gravestones come well above the eaves, and it looks as if an active man could jump over it. In a short article on "Some Illustrators' Errors," by "T. A. C.," some instances are given of the curious way in which illustrators of books will ignore the author's description of the circumstances of a scene. We could furnish, however, some much more striking examples, and by more illustrious names. The subject would be worth a fuller treatment. Some illustrators seem never to have read the books they illustrate.

In the *Artist* Mr. A. T. Baxter's plan, elevations, and details of the decoration of a bedroom, perhaps a little too defiantly "original," are nevertheless most praiseworthy. An article on "Flemish lace" has some beautiful illustrations. The number includes a separate plate of the painting by Mr. F. M. Bennett of "Ladas" which obtained the students' gold medal at the Royal Academy, and of the high quality of which we spoke at the time.

The *Studio* (January 15) includes some reproductions of sketches by Carl Voss, who makes architectural sketches in a good old-fashioned blunt pencil style which takes one back to earlier times. Among the illustrations are two wardrobes designed by Mr. Ambrose Heal, one of which we remember in the Arts and Crafts Exhibition, and which really possess originality without being fussy or eccentric.

How little one can say this of the interior decorations and other details illustrated in the *Berliner Architektur-Welt*—the two interiors in the premises of the Continental Havana Company, for instance, the style of which is almost enough to make one ill. The best things in the number are the sketches of imaginary

architectural groupings by Herr Otto Rieth of Berlin, of whose work of this kind we have seen a good deal, and who has really original genius. His executed building, the Villa Staudt, though not in a style that would find favour in England, has a power of its own, though the colossal mask in the frieze has a bad effect in dwarfing the scale. Among the illustrations of works from the Berlin Art Exhibition of last year is one of a very pathetic picture by Herr Souchay, under the title "Verlassen."

The *Architectural Review* (Boston), No. I. of Vol. VII., contains several illustrations of the buildings of the University of Pennsylvania, by Messrs. Cope & Stewardson. We do not like all the details very much, but the view of the north-west corner of the quad shows a picturesque piece of architecture. A new front to a banking-house at Philadelphia shows that some of the American architects are beginning to be taken with that rather exaggerated notion of the beauty of extreme simplicity which is getting into fashion in England. The front hardly suggests a bank. In an article on "Round-arched Gothic architecture" is a remark which is worth note, to the effect that "one of the few solecisms in Gothic architecture is this, that the mouldings were largely established by exterior requirements, and that once determined, they were repeated within the buildings, regardless of the fact that no rain ever fell upon them." Mr. Howard Walker's well-written essay on "The Theory of Mouldings" is continued, dealing in this chapter with Roman mouldings.

The *Architectural Record* (quarterly) contains an article by Mr. Russell Sturgis, "An Unscientific Inquiry into Fireproof Building," to which we may return. Other articles are "Colonial Art and Modern Pianos" by Mr. J. Burr Tiffany, being a consideration of the adaptation of details of the "Old Colonial" style (which is practically the "Adam" style) to the decorative treatment of pianos; and "Our Acquired Architecture," by Mr. Montgomery Schuyler. The latter paper refers to the architecture of Manila and the Philippines, which has recently become of special interest to Americans. Mr. Schuyler is of opinion that "our new possessions seem to be supplied with all the public architecture they are likely to need for a good many years to come. No 'thoughtful patriot' could contemplate with equanimity the prospect of having designs for public buildings in Havana, in Manila, or in San Juan de Puerto Rico, sent out from the office of the average Supervising Architect to come into competition with the architectural remains of the Spanish occupation. They could not stand it." We quite sympathise with this view of the matter, and hope it will be acted upon.

The most interesting subject dealt with in the *Engineering Magazine* is "The Actual Condition of the Panama Canal," by Mr. Chas. Paine. We are surprised to read of the impression received by the writer, that not only had the Old Canal Company made immense preparations in the way of plant and dwellings along the line of the canal, but that much of this is still available for use with a very little repair. This is quite at variance with other accounts, as also is the statement that the Isthmus is not at all unhealthy, whereas the reverse of that opinion seemed to be the one thing in which every one was agreed. As to the plant, we may quote the following:—

> "The Isthmus, along the line of the railroad, is covered with dwellings, sidings, contractor's plant, and materials for construction of every description. The dwellings having been built of galvanised corrugated iron, have suffered little depreciation; they could house twice as many officials and workmen as are likely to be at any time employed. . . . As to the plant, of dredges, barges, dump-cars, excavators, boilers, pumps, track, &c., only an inventory could give an idea; for instance, there are 420 contractors' locomotives. All these things are on the ground, and with a little oiling and slight repairs are ready to resume work. There are machine shops fitted up completely, with foundries attached, ready to effect any required repairs, and warehouses containing all the materials necessary for making them."

Mr. Paine also speaks with great praise of the completeness of the surveys, which leave nothing more to be done in this way. All this seems surprisingly *couleur de rose*; but as Mr. Paine is a Past President of the American Society of Civil Engineers he ought to know what he is talking about.

Fcilden's Magazine includes the continuation of an article on the "Bacterial Treatment of Sewage" by Dr. Rideal, with a large number of diagrams and illustrations of filter beds and plant which add to its value.

The *Antiquary*, under "Notes on some Kentish Churches" (iv.), gives particulars and some sketches of St. Paul's Cray, by Mr. J. Russell Larkby. "Some Early Eighteenth Century Inventories," by Mr. Jenkinson Kaye, contains some curious information as to household goods of that period. There are some further details as to the exploration of Caerwent.

The *Quarry*, under its heading "The Mineral Industry of the United Kingdom," enters on the subject of Northamptonshire, commencing with a full analysis of the geology of the county, accompanied by sectional diagrams.

The *National Review* contains an article by Mr. H. Percy Harris on "The London Housing Problem," giving a brief historical sketch of what has been done by the London County Council, so far, under the provisions of the "Housing of the Working Classes" Act. At the close, the writer refers to the fact that Part III. of the Act restricts the power of the Council to the purchase of land within the county, and that the suggestion has been made that this restriction should be removed, so that, if found desirable, land should be bought for the erection of workmen's dwellings in the suburbs outside the metropolitan county boundaries. He then calls attention to the possible effects of the process in restricting and discouraging private enterprise in erecting dwellings, and suggests that the only course open is to make a trial of the powers contained in Part III. of the Act, and also "to see whether the municipality cannot do something to encourage private enterprise by leasing suitable sites to private companies or otherwise, and thus minimise the dangers which are feared if it comes forward as a mere competitor in the building trade." The same number contains a very interesting article by Professor Gregory on "Mars as a World," giving a summary as to what is now known, and what may so far be conjectured, in regard to the condition and physics of our neighbour planet. He repeats again, we observe, the argument that intelligent inhabitants of Mars, if they exist, are probably a larger race than those on this planet, in consequence of the lesser weight from attraction on Mars. We confess we have never been able quite to see the logic of this argument. If all living things on this planet tended to run to about the same size and weight, we might naturally conclude that with the lesser attraction on a smaller planet they would tend to run to a larger size; but seeing that the earth supports both mice and elephants, there appears to us to be a weak point in the argument, and that it is at all events inconclusive.

In the *Century* the article on "Midwinter in New York," with its illustrations, is of interest as assisting us in forming a realistic idea of the life of a great city far removed from us, and yet very near in its relations to us. The frontispiece is a fine wood engraving by Mr. Timothy Cole from one of Morland's pictures, Mr. Van Dyke adding a few judicious critical remarks about that gifted and dissipated artist. Of some interesting details in an article on Napoléon we have spoken on another page.

Scribner contains an article on the interesting subject of "The Problems of a Pacific Cable," with a great of practical detail as to the making of such cables and the problem of finding the most suitable bottom ground for laying them on. Under "The Field of Art" is an interesting letter from a painter (Mr. F. Crowninshield) in regard to his own pictures from some Roman villas, and the difference between a painter's and an architect's objects and methods in making a picture of architectural subjects.

In *Harper*, Dr. Henry Smith Williams writes the first of a series of articles on "To-day's Science in Europe," which is concerned with the marine biological laboratory. Mr. Dreiser's article on "The Railroad and the People," in Western America especially, is of a certain general application in the practical illustrations which he gives of the manner in which a railway may create the traffic interest out of which it is afterwards to make its earnings.

The *Pall Mall Magazine* includes a partly historical, partly illustrative article "At St. John's Gate, Clerkenwell," and an article on "Gems," with some information and illustrations as to their manipulation by the jeweller.

The *English Illustrated Magazine*, under the title "How Fires are Extinguished," gives a number of curious reprints of old illustrations of fires, and also of the former *matériel* for extinguishing them.

We have received also the *Revue Générale*, the *Gentleman's Magazine*, the *Genealogical Magazine*, and *Knowledge*.

COTTAGE HOMES FOR DISCHARGED SOLDIERS, BISLEY.

THE drawing shows the elevation and two plans of one group, or couple, of the cottage homes for discharged soldiers at Bisley, constituting "the building trades' gift to the nation," to be carried out with materials given by various firms, from the plans and under the direction of Mr. Edwin O. Sachs, as honorary architect.

BUILDING TRADES' GIFT TO THE NATION:

LIST OF FURTHER CONTRIBUTIONS.

For the Entire Set of Buildings.

Messrs. Eastwood & Co., Ltd.—750,000 stock bricks for the whole of the buildings.
Messrs. Doulton & Co.—2,000 ft. of drain pipes and yard gullies for the six homes.
Mr. James Brown—Moulded bricks and ornamental panels for the whole of the buildings.
Messrs. G. Tucker & Son (Loughborough).—Chimney-pots for all six homes.
Messrs. Humphreys.—A 30-ft. iron building for workshops.

For Individual Sections of the Work.

Messrs. Fredk. Braby & Co.—1,600 sq. ft. of zinc roofing.
Messrs. Maw & Co. (Shropshire).—250 yds. super. tiling for paving.
Mr. George Jennings (preliminary).—Sanitary fittings for one home.
Messrs. Geo. Woolliscroft & Son (Hanley).—The roofing tiles for one house.
Messrs. W. H. Lorden & Son (Upper Tooting).—Twelve window sashes and frames.
Messrs. E. & C. Braby.—1,000 ft. super of opal tiling.
Messrs. Dent & Hellyer.—Sanitary fittings for one home.
Messrs. Stephens, Bastow, & Co. (Bristol).—Forty doors.
The Sub-Wealdon Gypsum Co. (Robertsbridge, Sussex).—25 tons sirapite plaster.
Moorgate Engineering Co.—Iron staircase for recreation house.
Mr. Jabez Thompson (Northwich, Cheshire).—1,000 patent brickwoods.
Mr. William Wiffen (Holsworthy, Devon).—Oak lintels for one home.
Darbisher's Granite Quarries (Penmaenmawr).—Some granite for macadam.
Messrs. Towers & Williamson (Grantham).—Clinkers for workshops and stable floors.
The British Uralite Company.—18,000 square feet of uralite slabs.
Kensington Blind Works.—Outside blinds for one house.
Messrs. Burt & Potts.—Metal casement windows for ground floor of recreation house.
Mr. Thomas Faldo.—Vertical damp course for three service blocks.
Messrs. Burke & Co.—Tiling for verandahs and connexion corridors.
Mr. John Marsland.—Six dwarf cupboards.
The Patent Victoria Stone Company.—100 ft. cube Victoria stone for entry steps.

ADDITIONAL SUBSCRIPTIONS:

	£	s.	d.
Mr. George Parker	100	0	0
Messrs. G. H. & A. Bywaters & Sons	50	0	0
Messrs. George Farmiloe & Sons, Ltd.	26	5	0
Messrs. Dove Bros.	21	0	0
Messrs. Holliday & Greenwood	10	10	0
Messrs. T. & J. H. Stirling	10	10	0
Mr. William Grellier	5	5	0
Mr. A. Bedale	2	2	0
Messrs. Hubbard & Moore	1	1	0

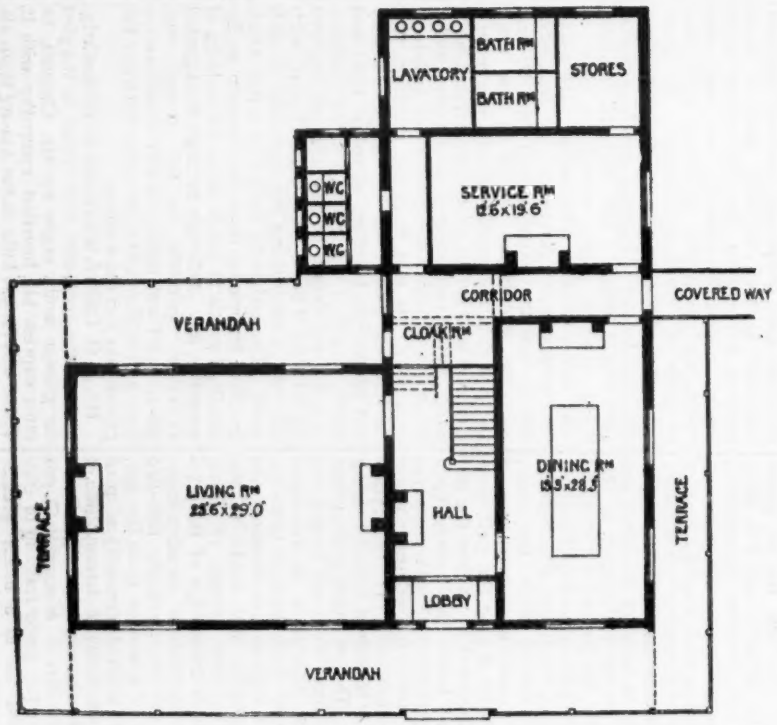
THE ARCHITECTURAL ASSOCIATION DISCUSSION SECTION.

THE seventh meeting of the session of the Discussion Section of the Architectural Association was held at 56, Great Marlborough-street, W., on the 2nd inst., Mr. W. B. Hopkins in the chair.

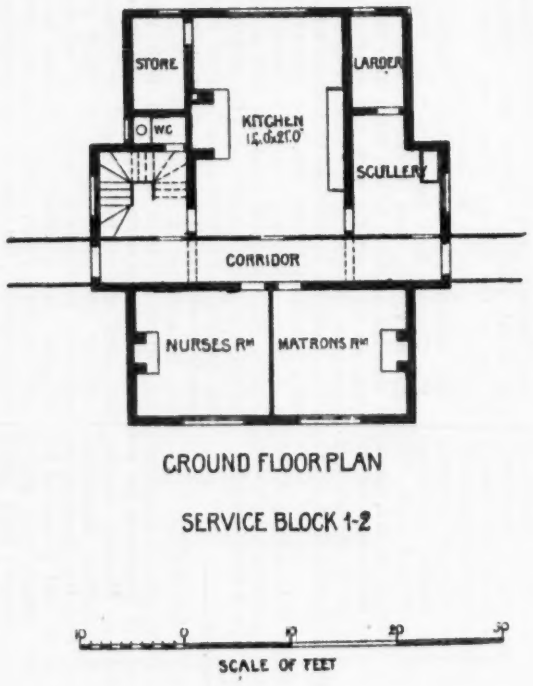
Mr. G. M. Nicholson read a paper on "Opening up Land for Building Purposes," of which the following is an abstract:—

In opening, Mr. Nicholson spoke of great judgment being required in opening up building estates, want of skill or carelessness on the part of his professional adviser frequently leading a client into heavy losses which he did not easily forget or forgive. Each estate required judging on its merits as to the class of property proposed to be erected. Wealthy people, being able to choose their locality regardless of expense, naturally choose those parts which combine most advantages, such as gravel soil, high land, good water, pleasing views, large open spaces, &c.; while business people required easy and rapid access to the town where their business lay. For the working classes the land need not be so good, good land meaning high rents, which were prohibitive for them; and they also required easy access to the town. Mr. Nicholson urged the necessity of a careful study and planning of the

FRONT ELEVATION.



GROUND FLOOR PLAN
HOME N°1



GROUND FLOOR PLAN

SERVICE BLOCK 1-2

FIRST FLOOR PLAN
HOME N°2

BUILDING TRADES' GIFT TO THE NATION.

COTTAGE HOMES FOR DISCHARGED SOLDIERS, BISLEY. BLOCK A. MR. EDWIN O. SACHS, HON. ARCHITECT.

estate before making the roads, errors at this stage of the work often leading to wasted money and a spoilt estate. It was desirable to have as small an extent of road surface as possible, both on account of the land used for them being unproductive, and also on account of the cost of making the roads. He considered 45 ft. a fair width for good property; 30 ft. doing for cheaper class houses, if the local authorities would allow it. The roads should be constructed with as slight gradients as possible, cuttings and embankments being avoided. The work in forming the road needed to be well done, as local authorities would require them to be in a satisfactory condition before they would take them over. The building plots required sufficient depth for a fair-sized garden, except, of course, in town property, where it would make the rent prohibitive. If land was too expensive for large gardens, it was sometimes wise to build the houses round a square, which enabled residents to have a common tennis lawn and garden, the cost of maintenance being spread over the several houses.

The discussion was opened by Mr. S. B. Beale, who proposed a vote of thanks to Mr. Nicholson. Mr. Beale described the usual method of developing estates adopted by jerry-builders, and pointed out how extremely unsatisfactory the result was. He did not consider that the client should impute the responsibility for future loss to the architect, and held that the client could only ask his architect: "Is this land suitable for building on; if so, what should be the class of buildings put upon it?" He strongly condemned the common garden, and preferred the private garden to each house, as being much more enjoyable for the householder. Mr. C. H. Strange called attention to the drainage difficulty in laying out country estates, where a cesspool was almost a necessity until the local authority undertook the sewering of the district. Mr. Matt Garbett considered any property fairly safe up to a rent of 50*l*., with which view Mr. H. J. Leaning agreed, stating that there was no market for houses over 80*l*. The discussion was continued by Messrs. J. H. Pearson, Taylor, Hewitt, Brodie, G. H. Smith, and the Chairman.

The Special Visitor, Mr. H. Lovegrove, F.S.I., summed up the discussion, and called attention to the usual want of design in flank houses.

ENGINEERING SOCIETIES.

SOCIETY OF ENGINEERS.—The first ordinary meeting of the Society of Engineers for the present year was held on Monday evening, at the Royal United Service Institution, Whitehall. Mr. J. C. Fell, the President for 1899, occupied the chair, and presented the premiums awarded for papers read during that year, viz.:—The President's Gold Medal to Mr. E. Wynter Wagstaff for his paper on "The Shan Hill Country and the Mandalay Railway"; the Bessemer Premium to Mr. R. G. Allanson-Winn for his paper on "Foreshore Protection, with special reference to the Case System of Groyning"; a Society's Premium to Mr. Gordon Harris for his paper on "Water Supply to Country Mansions and Estates"; and a Society's Premium to Mr. Ewart C. Amos for his paper on "Machine Tools." Mr. Fell then introduced the President for the present year, Mr. Henry O'Connor, to the meeting, and retired from the chair, receiving a hearty and unanimous vote of thanks for his services during the past year. The President proceeded to review the different papers read before the Society upon gas engineering, noting that while the members interested in such matters formed nearly 10 per cent. of the total membership, in forty-six years there had been only seventeen papers bearing upon that subject. The automatic grab system of unloading coals from ships and barges was explained, and the adaptation of the same system for lifting coals from the store to trucks. The simplifying of regenerative furnaces was advocated, and allusion was made to the saving of fuel by this system of firing and by the thorough knowledge of its principles. Mention was made of the advantages of coke as fuel, and some remarks followed upon the recovery of cyanogen from the gas, and on the different methods generally adopted for its removal in the forms of ferrocyanide of potash or soda and sulpho-cyanide. The President complimented Mr. F. Southwell Cripps upon his notes on the guide framing of gas-holders which had led to a much greater knowledge of the stresses in those important structures in a gasworks. With regard to gas engines, the President observed that they were not sufficiently pushed by gas engineers, as they did not use them to the full extent possible in their own works, and could not, therefore, expect others to employ them for the many purposes for which they are so admirably adapted. The large size of some of the gas engines made on the continent enabled them to be used very economically for the supply of power. In regard to photometrical matters, the President described a photometer, designed by himself, for obviating the necessity for any calculations. The improvements in the chemical testing of gases were also noticed, and the President proceeded to speak of the marvellous increase of light produced by the Welsbach incandescent burner. Its effects on the gas industry were considered, and the necessity of a stronger mantle was advocated. This led to an allusion to the need of greater knowledge of gas matters on the part of the ordinary gasfitter, and to the suggestion that lectures should be given by gas managers and others upon the points to be most carefully borne in mind by the gasfitter and the general public.

LONDON AND PROVINCIAL BUILDERS' FOREMEN'S ASSOCIATION:

ANNUAL DINNER.

THE annual dinner of the members of this Association was held at Anderton's Hotel, Fleet-street, E.C., on Saturday last, Mr. Arthur C. Nightingale presiding. He was supported, among others, by Mr. A. O. Collard and Mr. Frank Foster.

The Chairman gave the toast of "The Queen and Royal Family," which was followed by that of the "Army, Navy, and Reserve Forces," proposed by Mr. Lansdowne.

Mr. Mackenzie (of the Volunteers) responded.

Mr. Chessell then submitted "The Architects, Surveyors, and Builders," and said it was his intention to ask them also to include in the toast the civil and mechanical engineers. Frequently the builders' foremen had to carry out instructions and works which were inseparable from the two last-named professions. He hoped it might be possible to arrange more frequent meetings between the members of this Association and the architects' and builders' associations. He believed much benefit would result from a closer intimacy and interchange of thought on some of the various problems connected with trade disputes,—the adjustment of threatened strikes, and other matters that cropped up between employer and employee. They might also profitably formulate a system of technical education on a sound and practical basis, which would not only put us on the same level as other nations, but make us superior to them. He looked upon our present system of technical education as very deficient, and, in some instance, he believed time and money were wasted. Generally speaking, we were only "pottering" about with the subject, and trying all kinds of crude experiments. By more frequent conferences between the professions and the builders' foremen much practical good would result. The builders' foremen, being practical men, would be able to offer much valuable information. He asked the professional gentlemen to remember that it was the foremen who had to deal with the multifarious details of the work and materials, the practical details of construction, and who had to solve labour questions of minor importance, none of which come under the notice of either the builders or architects as a body. It was from the architects that the foremen gained the knowledge of beauty and proportion, harmony of colour, light and shade, &c., all of which had a strong tendency to refine and elevate the character and improve the intellect of those who were charged with the duty of supervising the execution of such work. The architects could also derive much practical knowledge from the foremen in the details of practical construction, adaptability of materials, &c. Although he might be regarded as rather optimistic, he felt strongly that much sound and lasting benefit would accrue from a more frequent intercourse between the professions and the foremen.

Mr. A. O. Collard, who spoke in acknowledgment of the toast, said, with regard to the plea for greater unity urged by Mr. Chessell, he must express his heartiest sympathy with it. There was far too little union among them all. If they went back to the mediæval ages, before the architect and builder as such existed, there was a strong bond of union which found expression in the system of freemasonry now so extensively known in this country. That system was, generally speaking, based upon the theory that all men should work together and should be paid according to their work. He wished men were paid on those lines nowadays. True, there were no architects in those early days. The man who showed the most genius delineated his building with a stick in the sand, or possibly on a parchment roll. In that way there was a distinct union amongst all men. He, of course, did not say it was possible to go back to the system, but he did say that they had arrived at a crisis in the allied trades, when those most interested in directing their course should be in touch with one another. Personally, he attached great value to the abilities of the builder's foreman who was one of those men who knew everything about building work; he (the speaker) should like to see architects more in sympathy with the foreman.

Mr. Foster also responded.

The Chairman then gave the toast of the evening, "Success to the London and Provincial Builders' Foremen's Association." The building trade, he remarked, had advanced very rapidly of late years, and the foreman was the man who had advanced in knowledge with it. He wished the Association every success in its aim to bring its members up to a high state of efficiency in technical knowledge. If the Association continued to take men by the hand and instruct them, he saw no reason why they should not enjoy the thorough confidence of architects, engineers, and builders, and make the name of the Association a guarantee that its members were thoroughly qualified and efficient. At all events, he hoped that with inefficient men they would do what the solicitors did—strike them off the rolls.

Mr. Ackermann responded to the toast in the absence of Mr. G. H. Webster, the President of the Association. He stated that the Association had been in existence between six and seven years, and that they gave lectures from time to time on matters of interest and practical value to their members. The Association was young, but it meant to go to the front. They provided assistance for members who might from time to time require it, and had entered into an arrangement for insuring the members.

The remaining toasts were "The Visitors" and "The Chairman."

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday in the County Hall, Spring Gardens, Lord Welby, Chairman, presiding.

Loans.—On the recommendation of the Finance Committee, it was agreed to lend the Shoreditch Vestry 3,750*l*. for the erection of stores, &c.; the Stoke Newington Vestry 10,150*l*. for street improvements; and the Wandsworth District Board 3,500*l*. for the erection of stabling, &c.

The Paris Exhibition.—Mr. Crooks asked the Chairman of the General Purposes Committee whether the Committee would suggest to the Technical Education Board the advisability of allocating a sum of money for the purpose of sending skilled artisans to the Paris Exhibition.

Mr. Strong replied that the question should have consideration.

Fires and Insurance Companies.—The Joint Committee on Fire Brigade expenditure recommended that they "be authorised to address to the Municipal authorities of the principal cities and towns in Great Britain and Ireland a letter intimating that the Council, being of opinion that the rate of contribution of the fire insurance companies towards the expenses of maintaining the Metropolitan Fire Brigade should be increased, desires to have an expression of the opinion of such Municipal authorities on the general question as to the extent to which fire insurance companies should contribute towards the expense of maintaining fire brigades."

Mr. Antrobus moved that the recommendation be referred back for further consideration. He objected to it on the ground that it was a dereliction of duty on their part, as one of their primary purposes was the protection of property and life. He also pointed out that the increased contribution would raise the cost of insurance. London was the only city where a

contribution was made by the insurance companies towards the cost of the Fire Brigades.

Sir Harry Poland seconded the amendment; and, after considerable discussion, the amendment was negatived, and the recommendation adopted, with the exception of the words, "being of opinion that the rate of contribution of the fire insurance companies towards the expenses of maintaining the Metropolitan Fire Brigade should be increased."

Wellesley-buildings, Churchway, St. Pancras.—The Housing of the Working Classes Committee brought up the following Report, the recommendation being agreed to:—

"We submit working drawings, bills of quantities, specification and estimate in respect of the dwellings (Wellesley-buildings) to be erected on that portion of the area comprised in the Churchway, St. Pancras, scheme, which lies to the west of Churchway. The dwellings will provide accommodation for 360 persons, in sixty two-roomed tenements and tweny three-roomed tenements. Of these tenements fifty will be entirely self contained, and the remaining thirty will be self contained, but with detached private sanitary accommodation. The amount of the architect's estimate is 18,570*l.*, made up as follows:—Cost of buildings, 17,450*l.*; architect's expenses, quantity surveyor's fees, clerk of works, wages, &c., and provision for purchase of certain articles direct, 1,120*l.* We have forwarded to the Finance Committee the usual statement, giving the estimated receipts and outgoings in connexion with the dwellings. The statement shows that after allowing for interest and sinking fund there will be no charge on the rate by reason of the erection of the dwellings. The manager of works has intimated that he is prepared to undertake the work of erecting the dwellings at the amount of the architect's estimate. We recommend—That the estimate, amounting to 18,570*l.*, submitted by the Finance Committee in respect of the erection of Wellesley-buildings, Churchway, St. Pancras, scheme, be approved; that the work be executed by the Council without the intervention of a contractor, and that the plans, specification, quantities, and estimate of 17,450*l.* be referred to the works manager for that purpose."

Having transacted other business, the Council adjourned.

APPLICATIONS UNDER THE LONDON BUILDING ACT, 1894.

At the meeting of the London County Council on Tuesday, the following applications under the London Building Act were considered. Those applications to which consent has been given are granted on certain conditions. Names of applicants are given in brackets. Buildings are new erections unless otherwise stated:—

Lines of Frontage.

Wandsworth†.—An addition at the rear of the "Duke's Head" public house, Lower Richmond-road, Putney, to abut upon the roadway of the embankment of the River Thames (Mr. C. H. Flack, for Mr. A. Brewer and Messrs. Young & Co., Limited).—Consent.

Battersea.—A four-story building on the site of No. 27, St. John's-hill, Battersea (Messrs. H. Wakeford & Sons for the Commanding Officer of the 4th Volunteer Battalion, East Surrey Regiment).—Consent.

Hackney, Central.—Two blocks of residential flats on the north side of Clapton-square, Hackney, on the site of No. 26, Clapton-square (Mr. E. C. Beaumont for the Freehold and Leasehold Investment Company, Limited).—Consent.

Hackney, South.—A mission church on the east side of Powerscroft-road, Lower Clapton, at the corner of Chatsworth-road (Mr. B. Crewe and Mr. F. R. Farrow for the Rev. G. C. Fletcher).—Consent.

Hammersmith.—That the application of Mr. J. Hume for an extension of the period within which the erection of one-story shops on part of the forecourts of Nos. 360, 362, 364, and 366, King-street West, Hammersmith, was required to be commenced, be granted.—Agreed.

Islington, North.—That the application of Mr. F. E. Grayson for Mr. D. F. Keer, for an extension of the periods within which the erection of one-story shops upon part of the forecourts of Nos. 123 and 125, Stroud-green-road, Islington, was required to be commenced and completed, be granted.—Agreed.

Lewisham.—Seven houses on the east side of Bromley-road, Catford, next Langley-house (Mr. G. Tolley for Mr. J. Laird).—Consent.

St. George, Hanover-square.—An open portico at the entrance to No. 28, Grosvenor-square, St. George, Hanover-square (Mr. R. G. Hammond for Mr. J. Garlick).—Consent.

Islington, North.—A brick, iron, and glass covered way in front of Hanley Hall, No. 2A, Sparsholt-road, Stroud Green (Mr. J. W. Abraham for the vicar and churchwardens of St. Saviour's Church).—Refused.

Lewisham.—Nineteen houses on the south side of Davenport-road, twenty-three houses on the west side of Farley-road, and thirty houses on the east side of Farley-road, Catford (Mr. C. Farley).—Refused.

Southwark, West.—A one-story shop on the forecourt of Nos. 121 and 122, London-road, Southwark (Mr. G. A. Lansdown for the London Cork Lino Company).—Refused.

Westminster.—A two-story building on the north side of Victoria-street, Westminster, next the Royal Standard Music Hall (Messrs. Brown & Barrow for Mr. T. S. Dickie).—Refused.

Projections.

Greenwich.—Wood and tile pents over the entrances to eighteen houses in Swallowfield-road, twelve houses in Priolo-road, and fourteen houses in Sundorne-road, Charlton (Mr. R. G. Abbott).—Consent.

Kensington, North.—A porch at the entrance to No. 8, Kensington Park-gardens, Kensington (Messrs. Humpheys-Davies & Co. for Mr. G. Humphreys-Davies).—Consent.

Islington, East.—No order with respect to the application of Mr. S. C. Harrow for the Rev. W. J. Dawson, for consent to the retention of wood and glass inclosures to a portico at the entrance to No. 17, Highbury-terrace, Highbury.—Agreed.

City of London.—An iron and glass shelter at the entrance to the Holborn-viaduct Hotel, Holborn-viaduct (Messrs. Spiers & Pond, Limited).—Refused.

Islington, North.†—That Mr. W. G. R. Sprague be informed that the Council is not prepared to accede to his request for permission to retain a projecting iron and glass illuminated sign in front of the Holloway Theatre of Varieties, Holloway-road, Islington.—Agreed.

Strand.—An iron and glass shelter at the entrances to the Royal Italian Opera House in Bow-street, Strand (Mr. E. O. Sachs for the Grand Opera Syndicate).—Refused.

Strand.—Iron and glass shelters over the entrances to the London Hippodrome at the junction of Cranbourn-street and Charing-cross-road, and also in Little Newport-street (Mr. F. Matcham for the London Hippodrome Company, Limited).—Refused.

Width of Way.

Bow and Bromley.—A building, to be used as a bakery, on the east side of Fawe-street, Morris-road, Bromley-by-Bow (Mr. Max Clarke for Messrs Spratt's Patent, Limited).—Consent.

Space at Rear.

Islington, West.—An additional story on the rear portion of No. 60, Muriel-street, Islington, at the corner of Wynford-road (Mr. W. M. Weir for Mr. B. R. Baker).—Consent.

Wandsworth.—A modification of the provisions of Section 41 of the London Building Act, with regard to open spaces about buildings, so far as relates to the proposed erection of a four-stall stable with coach-house and loose-box, and loft over, in a garden at the rear of houses on the west side of Danemere-street, Lower Richmond-road, Putney, without an open space at the rear (Mr. A. G. Hastilow for Mr. C. Coward).—Consent.

Deviations from Certified Plan.

Finsbury, Central.—Deviations from the plan certified by the District Surveyor, under Section 43 of the London Building Act, so far as relates to the proposed rebuilding of "The George" public-house, St. John-street, Clerkenwell, on the site of Nos. 178 and 180, St. John-street, at the corner of Compton-street (Mr. W. A. Aickman, for Mr. H. H. Finch).—Consent.

Line of Frontage and Width of Way.

Bow and Bromley.—One-story shops upon part of the forecourts of Nos. 102 and 104, Chrisp-street, Poplar (Mr. A. J. Sheffield for Mr. J. W. Kelly).—Refused.

Width of Way and Construction of Building.

St. Pancras, West.—A play-shed at the Stanhope-street school, abutting upon Fitzroy-place (Mr. T. J. Bailey for the School Board for London).—Consent.

Rotherhithe.—Two iron sheds at Messrs. Quirk, Barton, & Co.'s lead works, Rotherhithe-street, Rotherhithe (Mr. A. R. Stenning for Messrs. Quirk, Barton, & Co.).—Refused.

Formation of Streets.

Holborn.—That an order be issued to Mr. A. Murray, sanctioning the formation or laying out of two new streets for carriage traffic to lead out of the side of Tottenham-court-road into Chenies-street and Store-street respectively (for the City Lands Committee of the Corporation of London). That the name Alfred-place (in continuation) be approved for each of the new streets.—Agreed.

Norwood.—That an order be issued to Messrs. F. S. Brereton & Sons, sanctioning the formation or laying-out of a new street for carriage traffic to lead from Beckwith-road to Elmwood-road, Red Post Hill, Dulwich (for Mr. J. W. Towse, the Rev. R. Muspratt, and Mr. J. Watt). That the name Wenham-street be approved for the new street.—Agreed.

Width of Way and Construction of Building.

Poplar.—A brick and iron erecting shop for machinery for steam-vessels, at Blackwall Iron-works, Stewart-street, Cubitt-town, Poplar, at less than the prescribed distance from the centre of a passage-way known as Folly-wall (Messrs. J. Stewart & Sons, Limited).—Consent.

Building for the Supply of Electricity.

Lambeth, North.—A wood and iron smith's shop at the premises of the Charing Cross and Strand Electricity Supply Corporation, Limited, No. 85, Commercial-road, Lambeth (Mr. W. B. Pinhey, for the Corporation).—Consent.

The recommendations marked † are contrary to the views of the Local Authorities.

Correspondence.

To the Editor of THE BUILDER.

Re FIRE-RESISTING FLOORS.

SIR,—Referring to Mr. Edward Street's letter in your last week's issue, it would be very interesting to hear whether he has taken a case before a magistrate, in which he has contended that a floor joist is a "small beam" in this connexion, and, if so, with what result? There is no doubt it is impolitic for a District Surveyor to construe the Act in such a manner that, if he has to fight a case, the decision is given against him, as I firmly believe it would be in this case.

G. T.

GENERAL BUILDING NEWS.

BOARD SCHOOL, HIGH WYCOMBE, BUCKS.—A new board school for infants, in Gordon-road, High Wycombe, has just been opened. The building is of red bricks with stone dressings, and the roof is slated. Mr. C. E. Moxham was the architect, and Messrs. A. W. Morton & Son, of Wycombe, the builders.

CO-OPERATIVE PREMISES, CAMBRIDGE.—The Cambridge Co-operative Society's new premises, in Burleigh-street, were opened on the 25th ult. The front is English Renaissance in style, and is built of red bricks with white stone dressings. On the ground floor are the butcher's, draper's, millinery, and shoe shops. The first floor contains the ready-made clothes department, and the second floor is taken up by a hall 70 ft. in length by 45 ft. in width. At one end of the hall is a platform. Wing buildings contain a kitchen, a committee-room, lavatories, and a retiring-room. The premises have been fitted with electric light by Messrs. Baily, Grundy, & Barrett. The buildings were designed by Mr. F. Harris, and erected by Messrs. Thoday & Co., of Cambridge. Mr. E. Vickers was the clerk of works.

SUNDAY SCHOOL BUILDINGS, LEEDS.—The memorial stones were laid on the 27th ult. of a new Sunday school, which is being erected alongside the Woodsley-road Congregational Chapel, Leeds. In addition to a large schoolroom and six classrooms, the scheme includes the provision of a gymnasium. The architect is Mr. G. F. Danby, of Leeds.

TOWN HALL, BATLEY.—At the Batley Town Hall, on the 1st inst., Mr. W. O. E. Meade-King, Local Government Inspector, held an inquiry into the application by the Corporation for sanction to borrow 26,850*l.* for the erection of a Town Hall and Municipal Buildings, 4,650*l.* for the provision of a police-station and police-court, and 4,500*l.* for the improvement of the public market, making a total of 36,000*l.* Evidence was given by Mr. A. Hanstock, architect, and Mr. O. J. Kirby, Borough Surveyor.

STEAM LAUNDRY PREMISES, HEATON, NORTHUMBERLAND.—The new steam laundry which has been erected in Rothbury-terrace, Heaton, for the Heaton and Benton Laundry Company, Limited, was opened on the 31st ult. In addition to the laundry departments, the buildings include a suite of offices, six-stalled stable, loose box, van yard, harness-room, dining-room for the workpeople, &c. Messrs. J. Howe & Co., of West Hartlepool, were the builders, and the architect was Mr. W. L. Newcombe, of Newcastle.

BANK PREMISES, BIRMINGHAM.—Two blocks of buildings are being erected in Broad-street as branches of Birmingham banks. The first block, which is at the corner of Hagley-road and Ladywood-road, will consist of two shops and premises for the Five Ways branch of the London City and Midland Bank. The building, designed by Mr. W. Hale, is in the Renaissance style, the lower portion being executed in red terra-cotta, and the upper portion in buff terra-cotta, while the flat wall spaces alone are in red brick. The block is four stories in height, with a frontage of 80 ft. to Ladywood-road, and 57 ft. to Hagley-road. The elevation is 37 ft. to the top of the cornice, from which rises a steep mansard roof in which are several dormer windows, while the corner is emphasised by a turret rising to a height of 65 ft. from the pavement. The two shops are in Hagley-road, the most prominent situation being left to the bank, which occupies the whole of the frontage in Ladywood-road, and about 23 ft. on the Hagley-road side. The total cost of the building is upwards of 7,000*l.* Lower down Broad-street, at the corner of Sheep-cote-street, is another block. The site was occupied by Messrs. Stanley & Byner, veterinary surgeons, and a new building has been raised, the rear part for the business of the veterinary surgeons, and the angle portion with two frontages for use as a branch

of the Birmingham District and Counties Bank. The frontage to Broad-street, including the porch, is 70 ft., and to Sheepcote-street 75 ft., while the elevation from the pavement is 55 ft. The building was designed by Messrs. Bateman & Bateman, and the style is English Renaissance. The lower portion is constructed in Hollington stone, and the upper part in Leicestershire red brick with stone dressings, the roof being covered with Clynderwyn slates. The block of buildings is four stories in height, and its construction involves an expenditure of between 5,000*l.* and 6,000*l.* In addition to the above, several other branch banks are in course of erection in Birmingham. For the London City and Midland Bank, Mr. D. Arkell has designed an establishment in Coventry-road, at the corner of Regent's Park-road. It is Classical in style, and built of Hollington stone, with half-lead mansard roof, the gable being so arranged as to permit of the insertion of a large clock. The building is three stories in height, with a frontage to each road of 47 ft., and an elevation of 43 ft. from the pavement. The banking-room is on the ground floor, and the rooms above will be let as offices. The cost of the building is estimated at about 10,000*l.* Lloyds Bank are concerned in the erection of two new branch banks, while two others are undergoing enlargement. The work is being carried out in accordance with the designs of Messrs. J. A. Chatwin & Son. The old bank at the corner of Great Hampton-street and Harford-street has been pulled down, and a new one is being built entirely of buff terra-cotta, at an estimated cost of about 7,000*l.* The height of the four-story building is 50 ft., and the frontage to Harford-street is 60 ft., and to Great Hampton-street 40 ft. The other new bank is being erected on a site at the corner of Monument-road and Beach-street. The building is of brick with terra-cotta dressings, and the height is about 35 ft., with a frontage of 50 ft. to each of the two roads. The bank at the corner of Stratford-road and Braithwaite-road, Sparkbrook, has been considerably enlarged by the addition of the adjoining house. The upper floors remain, but the ground floor has been reconstructed in Hollington stone, and there is now a frontage of 53 ft. to Stratford-road and 55 ft. to Braithwaite-road. A similar extension has been made to the bank on the Coventry-road, at the corner of Cyril-road, the frontages having been increased to 51 ft. in the former road, and 40 ft. in the latter.—*Birmingham Post.*

MUNICIPAL BUILDINGS FOR BLACKBURN.—The report of Mr. Bromley, of Nottingham, on the use to which the triangular block bounded by Northgate, Duke-street, New Market-street, and Blakey Moor could be put in the scheme for new municipal buildings for Blackburn, has been issued to the members of the sub-committee. In the first of two schemes, Mr. Bromley's A scheme, the architect provides police courts and offices, fire station, firemen's cottages, and a drill yard. This plan leaves a considerable space on the Northgate and New Market-street sides unbuilt upon. The architect provides in the police courts for a charge room, chief constable and detective's offices, the usual cells, mess-room, cloak-room, mortuary, &c., two court-rooms, with a couple of retiring-rooms for the magistrates, &c. In the fire station there are recreation and reading-rooms, in addition to the usual accommodation for engines, horses, harness, hose, &c. Twenty-seven firemen's cottages, consisting of parlour, kitchen, scullery, three bedrooms, and bath-room, with cellar, &c., are also provided. Some members of the Town Council thought that in addition to the new fire-station, police-offices, and police-courts, an assembly hall might be provided. This, the architect suggests, should be done by lengthening the present town hall, as he originally suggested. He puts the cost of the extension at 30,500*l.*, and the provision of police-courts, fire-station, &c., on the Northgate site at 41,610*l.* The total estimated cost of the A scheme is 81,110*l.* In his second scheme, B, Mr. Bromley would cover the whole of the site specified, and requires a little more. He provides, in addition to the buildings in his first scheme, an assembly hall to face the technical school, and to accommodate 3,000 people. He suggests, however, that "a hall of this size would be too large for ordinary purposes, and would be depressing to the performers when the room was not properly filled." "The exact size of the hall," he urges, "should be carefully studied before the scheme is carried further, and a few members should visit one or two assembly rooms and make comparisons of size of hall to population. The scheme further provides for forty firemen's cottages. The cost of the assembly hall in B scheme is put at 43,000*l.* and the rest of the buildings at 45,270*l.*—88,270*l.* Personally, Mr. Bromley prefers the A scheme, and in summing up he says: "The town hall, if situated in the market-place adjoining the municipal buildings, would appear to be in its right place, both as regards utility and tradition, and these buildings together would also have a fine architectural effect, and if the present Market Hall were cleared away they would be seen to still greater advantage."

TOWN HALL, CHATHAM.—A new Town Hall was recently opened at Chatham. The building is situate on the top of the Military Road, at the north end of the Brook, and immediately in front of St. Mary's National Schools. The architect of the building was Mr. G. E. Bond, and the builders were Messrs. West Bros., of Rochester and Stroud. The style of the exterior is English Renaissance. The facings are of Monk's Park stone, with Portland stone dressings and weatherings. A feature is the tower, which is 126 ft. in height, and is situated on the north-west side of the building. It contains a clock and a bell. Near the tower, and surmounting the west and south-west sides of the building, are four stone figures, representing Justice, Britannia, Agriculture, and Music. The principal entrance to the building is opposite the end of the Military Road, and this leads into a hall on the ground floor, containing the grand staircase, which is composed of white Sicilian marble steps. The floor is of marble mosaic. On this floor are the municipal offices, two rooms for the Surveyor and his assistant being in the front, overlooking the old premises of the Corporation. Behind these, along a passage way, are separate offices for the Inspector of Nuisances and the School Attendance Officer, with two committee-rooms. The offices of the Town Clerk and his clerks are in the main corridor, and beyond them are the separate offices of the Borough Accountant and the Rate Collector. On this same floor are also a waiting-room, a store-room, a cloak-room, and a strong-room, with lavatory accommodation. Besides the main entrance, there are four other entrances on the ground floor. Ascending the staircase, the principal floor is reached. Here is situated the Town Hall proper, on the south-east side of the building, with a length of 90 ft. and a breadth of 45 ft. The platform is at the town end of the hall, with ladies' and gentlemen's retiring rooms at the back and upon the same level as the platform. Near the platform is the main entrance to the hall from the principal staircase, while there are two additional stone staircases at the rear of the hall, for entrance and exit. Above the retiring rooms behind the platform is a room which can be utilised for an orchestra, having an arched opening of 28 ft. to the hall. This room can be used for various purposes, and might be turned into an organ chamber at some future time. Across the further end of the hall, opposite the platform, is a gallery, containing six landings, and capable of accommodating 150 people. The Council Chamber is on the same floor. The dimensions are 42 ft. by 30 ft. Accommodation for the public is provided in a gallery across one end. The special oak furniture and fittings were designed by the architect, and made by Messrs. J. Finch & Co., London. Upon the wall above the fireplace is a large oak board, bearing the names of the Mayors from the time the borough was incorporated in 1890. The Mayor's parlour is on the same floor as the Town Hall and Council Chamber, and also overlooks the Drawbridge-road. The dimensions of the parlour are 30 ft. by 17 ft. On the same floor are a cloak-room and a lavatory, while upon the landing, which is lighted by a dome in the roof, is an arcade with casement doors behind, giving access to the open balcony over the entrances. The second floor is devoted exclusively to the use of the caretaker. The basement is excavated. In the front is a room 38 ft. by 16 ft. Rooms are provided for an engine and dynamo when required. Here also is a room in which the heating apparatus is placed, the heating of the buildings being by low pressure hot water, with ornamental radiators. This work was carried out by Messrs. C. Kite & Co., London. The kitchen and scullery are surrounded with white glazed bricks. In the corner of the kitchen is a lift, communicating with the upper room and the Town Hall above. A special committee of the Council dealt with the furnishing of the building throughout, and were guided in their decisions, to a great extent, by the recommendations of the Architect and the Borough Surveyor (Mr. C. Day). The electric light was installed by Messrs. Stevens & Barker, of Maidstone, and the current will be derived from the mains of the local electric lighting company. The electric light fittings were worked out and made at the Edison and Swan Company's Ponders End factory. They are all finished in polished brass. The whole cost of the Town Hall, including the purchase of the site and the furniture and fittings, will be covered by the sum of 30,000*l.* Messrs. Geary, Walker & Co., of London, supplied the marble mosaic, parquet, and wood-block flooring.

"STUDENT'S COLUMN."—Owing to pressure of other matter, our Student's Column article ("Details of Structural Iron and Steel") is held over until next week.

REGISTRATION OF PLUMBERS.—Mr. Lees Knowles has renewed his notice in the House of Commons to call attention on an early date to the registration of plumbers and to move, "That it is desirable that the Government should introduce legislation dealing with the subject, and create a scheme for the national registration of plumbers."

ASSOCIATION OF MUNICIPAL AND COUNTY ENGINEERS.—The next examination will be held on Friday and Saturday, March 30 and 31 next, and, if necessary, another on April 6 and 7, at the Medical Hall, Victoria Embankment, London. The Council will accept applications to sit at either of these examinations in the order of priority, and as far as accommodation will allow. Particulars may be obtained from the Secretary, Mr. Thomas Cole, 11, Victoria-street, S.W

FOREIGN.

FRANCE.—The death is announced of M. Paul Jean, mechanical engineer, and president of the "Chambre Syndicale de l'Elairage," who has been concerned in carrying out some important works in electrical supply in Paris.——The annual exhibition of the Cercle de l'Union Artistique was opened in Paris last Sunday, in the Rue Boissy d'Anglas. Among the contents is a portrait of M. Detaille in Academician's costume, by M. Aimé Morot. There are some excellent works by M. Jacques Blanche and M. Benjamin-Constant, landscapes by MM. Çazin and N. Billotte, and sculptures by MM. Gérôme, Carles, Saint-Marceaux, Verlet, and Denys Puech. The exhibition of the works of Alfred Stevens was opened on Monday last, at the Ecole des Beaux-Arts.——M. Jules Lefebvre has been appointed professor at the evening classes at the Ecole des Beaux-Arts, in place of M. Cormon, who has been appointed head of the atelier of painting.——At Lunéville a monument is to be erected to the memory of Erckmann, the military novelist who wrote in collaboration with Chatrian; M. Barthold, the sculptor, has been commissioned to execute it. and a statue to the memory of Talma is to be erected at Poix du Nord.——Some new railway lines are about to be commenced in Algeria, from Berrouaghia to Laghouat, and from Tlemcen to Marghuia.

DURBAN.—The Theatre Royal, Durban, after having undergone various structural and decorative improvements, was re-opened on December 23 last. A new stage has been built, and the floor of the stalls and pit has been relaid with a fall of about 18 in. to the front. The removal of corridors and certain additions to the gallery have provided additional seating accommodation for about 250 persons. The architect was Mr. Cathcart W. Methven.

MISCELLANEOUS.

STREET IMPROVEMENTS, BRISTOL. — On the 1st inst. Mr. E. A. Sandford Fawcett, Local Government Board Inspector held an inquiry at the Bristol Council House, into an application of the City Council for sanction to borrow 22,055*l.* for works of street improvements. The following thoroughfares are to be paved with granite at a cost of 15,200*l.*:— Feeder-road, Silas-street, Brislington Bridge, Silverthorne-lane, Gas-lane (Netham-road), part of Commercial-road, and Cattle Market-road. The remaining 7,755*l.* will be spent on wood-paving part of Commercial-road, and Gloucester-road from Zetland-road to Berkeley-road. Mr. Wise and Mr. Yabbicom (the City Engineer) gave the inspector the required details.

BRISTOL MASTER BUILDERS' ASSOCIATION.—The annual meeting of this Association was held on the 1st inst., at the Guildhall, Small-street, under the presidency of Mr. F. N. Cowlin. Mr. H. J. Spear (secretary) read the annual report, which stated that, taken as a whole, the building trade must be congratulated upon its improved condition. The unfortunate war in South Africa, it was to be feared, will, to some extent, curtail the labour market, which must diminish the amount of skilled labour in all branches of the trade. One of the undertakings of the Association during the past year has been a revision of its rules and regulations. In consequence of the National Association having formed itself into federated districts throughout Great Britain and Ireland, that body had found it desirable to revise its rules, and the amendments suggested by the Northern Federation Centre were duly considered at the annual meeting of the National Association held in London on the 30th ult., and carried practically without dissent, subject to their coming into force twelve months hence. The new rules would considerably simplify and strengthen the organisation of the National Federation, and would also have the effect of bringing each federated area into direct touch with the Executive Council, with a result that could not but be of great advantage to the trade generally. In May and June last two meetings of the West of England and South Wales Federation were held, when it was unanimously resolved that the area covered by that organisation was unworkable, and that it was desirable to divide the Federation into three parts—South Wales, with Cardiff as its headquarters, being one section, Bristol and the West of England to Taunton as another, and Plymouth to embrace the remaining South and West of England towns. It is understood that Cardiff and the South Wales section is in full working order, and a preliminary meeting of the other two sections has been held, at which it was decided that, for the present, they should amalgamate, and steps were taken whereby it was hoped that at no very distant date their organisation will be complete, and they will be in perfect working order as a county federation. Notices had been received from the federated building trades demanding an increase of wages at the expiration of six months, and other alterations in the working rules. The Masons and Bricklayers' Societies have also given notice for an advance of ½d. per hour. The question of form of contract, as adopted by the municipal authorities in the city was brought up for discussion on several occasions

and eventually members of the Association, accompanied by the solicitor, had several interviews with the leading city officials as to an amended form of contract, which should be mutually satisfactory to all concerned, and it is believed that negotiations, which are still pending, will terminate in the adoption of a workable and practical form. —Mr. G. Humphreys, treasurer, presented the statement of accounts, which showed that there was a credit balance in hand.—The Chairman, in moving the adoption of the report and accounts, said that, as regarded the work done by the Association during the year, having regard to the troublesome conditions that had prevailed, they might congratulate themselves on what had been accomplished. The great feature at the early part of the year was the dispute with the plasterers. The result of it was to give masters experience and to show exactly the state of the plasterers' trade; their eyes had been opened to the fact that necessary steps should be taken to increase the number of apprentices and to foster the trade to the fullest extent of their power. It also showed where the weakness of the Association lay. That brought him to the subject of federation. If they were to keep abreast of the trades-unions of the country, it was essential that the masters' organisation should be as perfect and complete as was that of the trades-unions. They had locally been backward in the matter of federation, but it was now well on the way to accomplishment. Another thing which should receive their attention was the status of the workers, and particularly the work they turned out. At the Merchant Venturers' College, had been established new classes in which the trades-unions took an interest, and he, therefore, thought they should also associate themselves with the classes. There had been a considerable rise in the prices of material, which he believed would be advantageous to the trade.—Mr. E. Walters seconded the adoption of the report, and it was unanimously adopted. On the proposition of the Chairman, seconded by Mr. A. Krauss, Mr. G. Humphreys was unanimously chosen President. At the instance of Mr. G. Wilkins, seconded by Mr. E. I. Neale, a vote of thanks was passed to the retiring President, which he acknowledged. Mr. G. M. Gosling was elected vice-president on the proposition of Mr. G. Wilkins, seconded by Mr. E. Walters, and Mr. G. Humphreys was re-elected treasurer on the motion of Mr. R. Wilkins, seconded by the Chairman. The following members were chosen to form the committee for the year:—Messrs. E. Walters, E. I. Neale, J. Lovell, G. Wilkins, F. N. Cowlin, F. A. R. Woodward, G. L. Poole, and A. Dowling, together with the president, vice-president, and hon. vice-presidents.

THE CLERK OF WORKS.—On the 29th ult., a meeting of the Architectural Section of the Philosophical Society of Glasgow was held in the hall, 207, Bath-street, Mr. Lindsay Miller in the chair. Mr. Jas. Cairns, clerk of works, read a paper on "The Clerk of Works—his Duties in Connexion with Buildings." He began by giving a description of the duties of a clerk of works as compared with what they were in former days, pointing out that in order to fulfil the duties properly there was more need for technical training and a knowledge of building construction. He strongly recommended an extension of the sphere of labour in various technical schools, and then went on to compare what he called a jerry building with one of the best constructed in the city. He took occasion to point out that a number of the fires occurred through downright carelessness in placing timber in close proximity to vents. Thereafter he proceeded to describe the principal materials now used in buildings, and the great changes that had taken place in Glasgow within the last quarter of a century. Mr. Cairns traced the history of the manufacture of glass from the first century, and alluded to the extensive use of marble at the present time. Another point touched on was the development of the sanitary work in the city, and in connexion with that he made reference to the good work done by the late Mr. W. P. Buchan. He gave a few hints as to the electric lighting of buildings, and advocated the use of mechanical appliances in order to secure proper ventilation, that, in some cases, being impossible by natural means. The lecturer afterwards remarked that the building regulations of to-day had been a great boon to Glasgow, although he was prepared to admit that, in some small points, these were unnecessary and oppressive.

THE CEMENT TRADE.—According to Messrs. Tulloch & Co.'s annual report, the year just closed has been a record one in the cement trade. In all large producing countries—viz., the United Kingdom, Germany, Belgium, France, and, last but not least, the United States—supply has barely kept pace with demand. The English mills, favoured with uninterrupted home consumption during the winter months, and supported by a fair export demand, commenced the spring with small stocks. Advanced prices were paid for home and export consumption during the spring and early summer months, values attaining their highest during June-July. Whilst the trade has had a prosperous year, the margin of profit has been reduced, owing to increased expense of production, caused by higher cost of fuel and labour. Large public works in this country and abroad will probably absorb considerable quantities of cement during the next twelve months. Exports are as follows:—1898, 325,674 tons; 1899, 353,615 tons. One feature worthy of record in the United Kingdom trade is the increasing consumption of foreign cements in this country. The bulk of this is Belgian natural cement, which, when of reliable manufacture, can be safely employed on all ordinary building work.

SOUTH KENSINGTON APPOINTMENTS.—The Lord President has appointed Sir William Richmond, R.A., Mr. T. G. Jackson, R.A., Mr. E. Onslow Ford, R.A., and Mr. Walter Crane as a Council to advise the Department of Science and Art on art matters relating to Art Schools and Classes, the Art Museum, and the Royal College of Art. He has also appointed Mr. A. Spencer, Headmaster of the Municipal School of Art, Leicester, to be Headmaster of the Royal College of Art.

PUBLIC IMPROVEMENTS, ST. HELENS, LANCASHIRE.—The St. Helens Corporation have applied to the Local Government Board to issue a provisional order to empower the Council to put in force, with reference to certain lands required for the purposes of widening, opening, and enlarging Corporation-street, Hardshaw-street, and Barrow-street, the powers of the Land Clauses Acts with respect to the purchase and taking of lands otherwise than by agreement. In connexion with this the Council asked for a loan of 8,500*l*. The Corporation have also asked for leave to borrow a further sum of 20,000*l*. for electric lighting. At an inquiry held by Mr. W. A. Ducat, one of the Local Government Board's Inspectors, in the St. Helens Town Hall, on the 25th ult., the Town Clerk (Mr. G. W. Bailey) and Mr. J. S. Highfield, electrical engineer, explained the details of the schemes.

THE CARPENTERS' COMPANY.—A course of lectures on matters connected with building is being given at the Carpenters' Hall, London-wall, at 8 p.m. The first lecture was delivered on Thursday by Dr. G. Vivian Poore, on "The Dwelling-house from the Doctor's Point of View." The following lecture will be by Mr. Richards, Q.C., M.P., on "Old London," when Sir Walter Besant will preside. "English Halls and Mansions" will be the subject of Professor T. Roger Smith's lecture on the 22nd inst., when Mr. William Emerson, President of the Royal Institute of British Architects, will be in the chair. Mr. C. Stanley Peach will give the fourth lecture, on March 1, on "Electric Light Stations"; and the final lecture, March 8, will be by Mr. William Henman on "The Modern Hospital."

SLATE TRADE IN 1899.—The past year has been a very good one for the slate trade—a steady demand, not disturbed by any strikes or labour troubles at the quarries; and the present year promises well, partly owing to the advance in prices and diminished supply of foreign slates, but mainly to the prosperous state of the building trade in most parts of the country. Negotiations are being carried on for a combination of the leading quarries in the Festiniog and Carnarvon districts, and we understand non-dividend quarries will not be included. Several cases under the Workmen's Compensation Act have been before the Courts, mostly depending on the definition of "serious and wilful misconduct."

CAPITAL AND LABOUR.

SCARBOROUGH PLASTERERS' STRIKE.—The men who struck work a few days ago, in consequence of the masters declining to acknowledge the London Convention, have settled their differences with their employers.

NEWPORT (MON.) BUILDING TRADES' DISPUTE.—The long-continued dispute in the building trades at Newport is coming to a close in sections. At a recent meeting of the master builders and the representatives of the Bricklayers' Society, a code of rules, to last for five years, and an agreement as to wages, subject to six months' notice on either side (from November 1), were signed by both sides. This agreement makes peace with two of the trades and their employers, the banker masons having settled in September last.

LEGAL.

POINT UNDER THE LONDON BUILDING ACT, 1894.

THE case of the Queen *v.* Shiel and others came before a Divisional Court of Queen's Bench, composed of Justices Channell and Bucknill, on the 1st inst., in which cause was shown on behalf of Messrs. Snewin Bros. & Co. against a rule calling upon a Metropolitan Police Magistrate to state a case upon an information preferred under Section 74 of the London Building Act, 1894. This section requires that when a building is "used in part for the purpose of trade or manufacture and in part as a dwelling-house," the two parts shall be separated by walls and floors constructed of fire-resisting materials. The information was preferred in respect of a building which was intended to be used in part as a public-house and in part as a dwelling-house, and the question proposed to be raised by the case was whether a public-house was within section 74. The magistrate declined to state a case on the ground that the same point was considered and decided in the case of Carritt *v.* Godson, in which a Divisional Court, consisting of Justices Day and Lawrance, held that a public-house was not within the section. Carritt *v.* Godson was a case decided under a criminal section of the London Building Act, 1894, and there was accordingly no right of appeal from the decision to the Court of Appeal. The London County Council had taken these proceedings under a different section in order, if possible, that they might take the matter to the Court of Appeal.

Mr. Justice Channell said that he should not feel at liberty to say that the decision of his learned brother's required reconsideration. Moreover, so far from thinking that Carritt *v.* Godson was wrongly decided, he thought, *prima facie*, that the decision was right.

Mr. Justice Bucknill concurred, and the rule was therefore discharged.

Leave to appeal was given.

PAYMENT FOR PLANS CONTINGENT ON ACCEPTANCE OF TENDER.

AT Marylebone County Court, recently, before Judge Stonor, Mr. J. Pattison, builder, Pickering-place, Bayswater, claimed 5*l*. 10s. from Mr. Eagle, 69 and 71, Westbourne-grove, W., the claim being for the preparation of plans and specifications for alterations carried out at the defendant's shops.

The plaintiff's case was as follows:—In February, 1898, he was asked by the defendant—for whom he had previously executed building works—to get plans for certain alterations contemplated at the shops. These instructions were stated in a letter from defendant to plaintiff in the following terms:—"I wish you to prepare for me plans and specifications for the proposed alterations at 69 and 71, Westbourne-grove . . . and when approved of, I shall ask you to tender for any work I may have done." The arrangement was, continued the plaintiff, that if his tender was accepted he should not receive payment for the preparation of the plans and specifications, but, in the event of his not getting the job, then he was to receive remuneration for the plans and specifications. The plans in question were prepared for him (plaintiff) by a Mr. Dennis, architect, and the sum now sued for was the precise amount which he had to pay the architect. The first and also the second set of plans were disapproved, but ultimately the first plans, with some alterations, were adopted. He (plaintiff) tendered for the work, but his tender was not accepted.

The Judge: I see that the claim is for the price of six plans—three sets, I understand—but if a person orders a plan, and this has to be altered, I should not think that he would expect to pay for more than one plan.

The plaintiff, continuing, said: When he applied for payment, the defendant denied his liability, and threatened to counter-claim with respect to work previously done by plaintiff.

Mr. George Dennis, architect, corroborated as to his preparation of the plans in question.

The defendant denied having arranged to pay for the plans in the event of plaintiff's tender not being accepted. The plaintiff had engaged Mr. Dennis to prepare the plans, and why should he (defendant) be called upon to pay?

The Judge: I do not think that there can be much doubt about this case. Here is a letter in which the defendant asks the plaintiff to get plans for him, and as there seems to be misunderstanding about any special arrangement having been made, I think the plaintiff is entitled to be paid for what he was asked to get. It appears, however, that he was only asked to get one set of plans, and I shall only allow for these. I find for the plaintiff for 2*l*., with costs.

The defendant counter-claimed on account of—it was said—the plaintiff having used distemper on some outside work when he agreed to use paint.

In defence, the plaintiff stated that he never heard of the counter-claim until he applied for his own account.

His Honour gave judgment for 5*l*. on the counter-claim, and allowed costs.

AN ARCHITECT'S APPEAL.

THE case of Chambers *v.* Goldthorpe came before a Divisional Court of Queen's Bench on the 5th inst., on an appeal by Mr. J. T. Chambers, an architect, from the decision of the judge of the Holmforth County Court in an action brought by the plaintiff against the defendant for fees.

It appeared that the defendant, who was erecting, or about to erect, some buildings, employed the plaintiff to prepare plans for the buildings and to superintend and measure up the work, which was done by a contractor. The contract contained the following clause (Clause 20):—"A certificate of the architect, or an award of the referee hereinafter referred to, as the case may be, showing the final balance due or payable to the contractor, is to be conclusive evidence of the works having been duly completed, and that the contractor is entitled to receive payment of the final balance." Another clause of the contract (Clause 22) provided that in case of any dispute or difference arising between the proprietor, or the architect on his behalf, and the contractor, as to the various matters specified in the contract, including questions "as to the works having been duly com-

pleted"; or in case the contractor should be dissatisfied with any certificate of the architect under certain clauses of the contract; "or, in case he (the architect) shall withhold or not give any certificate to which the contractor may be entitled, then such question, dispute, or difference, or such certificate, or the value of the matter which should be certified, as the case may be, is to be from time to time referred to arbitration." It seemed that the plaintiff had incorrectly measured up certain of the materials used, the result being that the amount of the certificate was larger than it ought to have been. The defendant admitted the plaintiff's claim, but counterclaimed for damages for negligence. The County Court Judge gave judgment for the plaintiff on the claim, and for the defendant on the counterclaim, and from this decision the plaintiff appealed.

Mr. Scott Fox, Q.C., contended that the plaintiff as architect acted in the same position as that of an arbitrator under the contract, and that so long as he acted honestly he was not liable to an action for damages for want of skill.

Mr. Lowenthal, for the defendant, contended that in the circumstances the architect was liable because in measuring up the quantities he was acting as the servant of the defendant and not as an arbitrator. He also contended that under the terms of the contract between the defendant and the builder, the plaintiff was never employed in any sense as arbitrator between them.

Mr. Justice Channell, in giving judgment, said that it could not be denied that if the plaintiff was acting in a judicial position no action would lie for mere negligence apart from fraudulent or dishonest conduct. It did not signify, in his lordship's opinion, that the person who acted as arbitrator was under contractural obligations to one or other of the parties between whom he acted. Assuming, therefore, that the plaintiff was under a contractural obligation with the defendant to act for him in certain matters, and that, being a contract between the defendant and the builder, the plaintiff was put into the position of an arbitrator, then in so far as he acted as agent only of the defendant he was liable for negligence, and in so far as he acted as arbitrator between the defendant and the builder he was not liable for negligence. The question was whether he was bound to exercise his judgment impartially between the two parties. If so, he would not be liable. It was clear from Clause 20 of the contract between the defendant and the builder that the architect was bound, in giving his certificate, to act judicially and impartially between the two parties. The effect of Clause 22 was that the builder had a right of appeal from the architect, but that did not prevent the architect from being in a judicial position in the first instance. In his opinion the appeal ought to be allowed.

Mr. Justice Bucknill concurred.

CASE UNDER THE LONDON BUILDING ACT, 1894.

THE case of the Crystal Palace Company *v.* The London County Council came before a Divisional Court of Queen's Bench, composed of Justices Channell and Bucknill, on the 7th inst., on the appeal of the Crystal Palace Company from the decision of Justices of London convicting the company with having erected on the grounds of the Palace a stable, loose box, stabling and harness-room, a forage-store and office, and a shoeing forge without having obtained the approval of the Council under Part VII. of the London Building Act, 1894, and the Act of 1898 amending the same.

It appeared from the statement of counsel that the Crystal Palace was re-erected by the appellants upon land acquired by them under powers conferred by Royal Charter in the year 1853. The appellants, in addition to re-erecting the building, laid out portions of the land as gardens and recreation grounds, and from time to time erected on the lands conservatories and buildings, in some instances physically connected with, and in others detached from, the main building. The buildings in respect of which the information was preferred were erected in May and June, 1899, for use in connexion with land laid out by the appellants as a polo ground, and were situated about a quarter of a mile from the main building. By Section 21 of the Crystal Palace Act, 1881, it was enacted that "the main building, conservatories, and waterworks of the Company, and the conveniences and other works immediately connected therewith, shall be exempted from the operation of Part I. of the Metropolitan Building Act, 1855, and of any other Act amending the same, but this exemption shall not extend to any dwelling-house or building except as aforesaid upon any part of the property of the company." The Metropolitan Building Act, 1855, was repealed by the London Building Act, 1894, but by Section 218 it is provided that where in any Act or document the provisions of the Act of 1855 are referred to, such Act or document shall, with the necessary modification, be read as if the corresponding provisions of the Act of 1894 were therein mentioned instead of the provisions of the repealed Act.

Mr. Freeman, Q.C. (with him Mr. R. C. Glen) argued that the stables, &c., were exempted from the provisions of the London Building Act by virtue of Section 21 of the Crystal Palace Act, because they were "immediately connected" with the objects for which the Crystal Palace was re-erected and the grounds laid out, viz., for the amusement and recreation of the public.

Mr. Justice Channell, without calling upon Mr. Horace Avory for respondents (the London County Council), in giving judgment said that the polo pony stables, &c., being a quarter of a mile from the main building, were not connected with it in the sense intended in the Crystal Palace Act, and were, therefore, not exempted from the provisions of the London Building Act.

Mr. Justice Bucknill concurred, and the appeal was therefore dismissed with costs.

RECENT PATENTS:

ABSTRACTS OF PATENTED INVENTIONS.

21,281.—APPARATUS FOR RAISING GAS PRESSURE. *A. Lecomte & I. Loeser.*—The apparatus comprises a water injector whence gas passes into the compression chamber, and thence through a tube whose internal opening is regulated by a float, above which is arranged a cone for controlling the by-pass to the supply chamber, which may be closed with a spring clack valve. The contrivance is intended for use in a system of gas supply, or in lamps and gasoliers, as also for the gas or air supply for blow-pipes, for melting and soldering metals, &c.

21,285.—ELECTRICAL IGNITION AND EXTINCTION OF GAS: *A. G. Kent-Johnston.*—The supply to the main burners of a series of street or other lamps is regulated from a distance. A pair of electromagnets, together with a horizontal plunger-valve, whose circumference is grooved, and which has armatures at the ends of its spindles, are fitted for each lamp. As the current passes through the one magnet the attraction of the adjacent armature brings a groove into register with the gas channels, and so admits gas to the main burner; but when the other magnet is energised the consequent movement of the adjacent armature and the valve either cuts off the gas supply (in the case of incandescent lamps with a separate pilot light), or disconnects the gas channels, so that a small amount of gas will flow to the bat-wing burner to serve as a pilot light, the separate pilot tube and jet being, in the latter instance, not required.

21,328.—GUARDS FOR CIRCULAR SAWS: *F. T. Greenwood.*—Above the saw is suspended a bar by means of a stem and bracket. From the bar are hung the guards which work over a pin at the bar's centre, and rise automatically as the wood is pressed against them, and then drop again when the wood leaves them.

21,343.—WOODEN BLOCKS AND TIMBER: *J. Hawley.*—The object of the invention is to form large blocks of timber by fastening a great many small blocks together. That is done with spiked plates, of which the spikes are first forced into the blocks, and the ends are turned down. Then the pointed ends of dowels are forced into the ends of the blocks, which will serve for paving streets, floors, and so on.

21,346.—PLASTIC COMPOUNDS: *C. Dörr.*—With finely powdered minerals, gravel, glass, scrap-iron, slag asbestos, rags, paper, wool, &c., is mixed gas tar (or some similar substance), which has been heated to a temperature at which sulphur compounds are given off, in a ratio of 7 parts to 1 part. The admixture, which can be moulded whilst it is hot, becomes hard as it cools.

21,365 and 21,368.—REGULATOR VALVES FOR WATER SERVICE PIPES: *D. T. Kenney.*—The main valve, working upon its seat in a cylinder fixed within a casing, is moved by a stem that passes through a tube-shaped extension and is provided, at the top, with a relief valve and a weight; when the latter valve rises a plate strikes the extension tube, and by lifting the main valve admits the flush, whilst an after-flush is effected by means of another plate which fits loosely on the stem that normally rests upon a ledge; in another shape a cylinder which is open at the bottom and closed at the top constitutes the main valve, and for high pressure the valve's seat is placed above the level of the inlets; the valves described will serve to flush a set of closet basins from one cistern. (21,368) In the casing is fixed a concentrical cylinder which guides a cylindrical valve and is perforated to allow the flush to pass; the main valve stem has a relief valve, with a short cylinder opposite the holes in the cylinder; with the rising of the relief valve the pressures on both sides of the cylindrical valve become equal, then the cylinders are raised and the flush passes, the time of closure being determined by the emptying of the chamber by means of a time screw.

21,379.—MANHOLE COVERS FOR DRAINS AND SEWERS: *F. T. Farrer.*—Flanges of the cover fit into channels made in the frame, a condensing chamber is formed by means of a sloped bottom, condensed liquid passing through an opening to a channel, where it makes a seal for the flange; a disinfectant is filled into a receiver, which is fitted in the inclined bottom, and escapes through an outlet accordingly as the liquid becomes condensed in the container or receiver.

21,383.—INSTRUMENT FOR PLOTTING CURVES: *W. Brooks.*—A set of tags to be held down with one's fingers, or with weights, or with drawing-pins, are attached to a flexible strip, and so impart a winding or other curved shape to the strip, which can then be used as a ruler; the tags may be secured by other means, such as frictional toggles, or right and left handed screws which enter an intermediate screwed sleeve, or they may be lengthened and slotted, with a cross slotted bar fitted with adjustable clamps.

21,418. — CASTING OF METAL ARTICLES: *W. Wilkinson.*—The various articles of aluminium or other metals having been cast to a size a little larger than their size when finished, are pressed by stamping them in dies to their required shapes, the surplus metal being cut away—if of aluminium they are pressed when hot; if cores are employed they should be oval-shaped, and, in the course of stamping, are to be replaced with circular mandrels, &c.

21,438. — TOOL-HOLDER FOR SCREW-CUTTING LATHES: *W. & A. R. Copley.*—In order that the tool may be canted to suit the cutting of the thread, the inventors have devised a shank with a head which has a slot wherein a nut and a washer tighten a split bolt; the tool fits into the bolt-head, which is grooved for that purpose, and presses against the shank-head, the bolt being adjusted angle-wise in the slot that it may cant the tool, which is sharpened at each end to admit of its reversal to cut right or left-handed threads.

21,493.—PIPE AND TUBE TESTING: *O. Frankl.*—The gas pipe, or system of gas pipes, is attached to a reservoir or holder, and compressed air is forced into it; a tube that reaches down to below the level of the liquid in the container is fitted tightly through its top; after the gas pipe has been closed at one end air is driven in and the liquid ascends in the tube, then, on the cock being turned, a leakage will be detected should the liquid fall.

21,533.—IMITATION STONE OR MARBLE: *T. W. James.*—A compound is made of blast-furnace slag, sand, gravel, and mica, together with colouring material, moulded under hydraulic pressure. For the sand, silica in solution may be substituted.

21,543.—WINDOW, DOOR, AND SIMILAR BOLTS: *F. Manton.*—Within a wall or other casing is mounted a long sliding bolt, which engages with a socket in the window or door, and is fastened in either a locked or an unlocked position by means of a screw pin that passes through a plate hinged on to the casing and through a hole, cut in the bolt, into a socket.

21,576.—ACETYLENE LAMPS: *W. P. Barltrop.*—Of the two walls which form the carbide chamber the inner wall is perforated and divided across; it is also provided with an upper cover made of pierced metal and canvas, and a lower cover, the holder being retained in position with a spring and a screwed cap having a rubber washer; the flow of water from the chamber above is regulated by a valve, which has a screwed spindle, of which the lower end is reduced in size; a disc, whose surface is irregular, is mounted upon the winged head that operates the valve and acts as a friction spring; the winged head also has a projection which—conjointly with a fixed stop—limits the valve's movement; a hollow, screw-threaded fitting, which has a hexagonal head and a tip of lava or other substance, forms the burner.

21,584.—FIREPROOF CEILINGS, FLOORS, &C.: *E. Homan.*—Upon one side of the blocks or bricks are made dovetailed projections, whilst dovetailed recesses, larger in size, are made on their other side, and slots for the flanges of the joist are formed in the end bricks of a row; the first row is laid upon the girder or wall on which the joists rest, with its projections turned outwards; the second row is then hung upon it, and a key is made with the cement or mortar. The contrivance is specified as being adapted for wall tiles, and various shapes can be given to the interlocking portions.

21,638.—ARC-LAMPS: *J. Stuart & J. H. Barlow.*—To the foot-piece is pivotted a support, having a channel section, which is adjustably fastened with a clamping-screw that passes through a slotted plate, and which carries a slider to be moved up and down by means of a rack, and to be turned by a milled head; the arms of the slider bear a double-threaded screw, which carries two other sliders that are guided by one edge of the support; a slotted plate upon the upper of the two sliders and the lower slider are extended upon one side of the support in order that they may bear the carbon-holders.

21,665-6. — TOOL-HEADS: *R. Llewellyn.* — For axes, adzes, choppers, hatches, and similar tools. The heads are made of two parts, whereof the one part is of cast iron or steel, and the other part consists of a renewable steel blade, having a recess in the eye to which the handle is fixed, with a serrated wedge which engages with serrations in the eye, and a loose wedge driven in. For picks the heads are formed with three sockets, of which two take the points of the pick, whilst the middle socket takes the handle, which is fastened with wedges. As the points can be detached the tool is available for use in narrow spaces.

THEATRE, BLYTH, NORTHUMBERLAND. — The new Theatre Royal at Blyth was opened on the 5th inst. The house consists of pit, stalls, circle, and gallery, and will accommodate over 2,000 people. Messrs. Hope & Maxwell, of Newcastle, were the architects, and Messrs. J. & W. Simpson, of Blyth, the contractors. The decorations were carried out by Messrs. Dean & Co.

MEETINGS.

FRIDAY, FEBRUARY 9.

Architectural Association.—Mr. Thomas Blashill on "Working Class Dwellings in Blocks." 7.30 p.m.

Institution of Civil Engineers (Students' Meeting).—Mr. D. E. Lloyd-Davies on "Underground Sources of Water Supply." 8 p.m.

Sanitary Institute (Lectures for Sanitary Officers).—Dr. H. Manley on "Sanitary Law: English, Scotch, and Irish; General Enactments, Public Health Act, 1875, Model By-laws, &c." 8 p.m.

Glasgow Architectural Craftsmen Society.—Mr. W. Allan, jun., on "Builders' Work." 8 p.m.

SATURDAY, FEBRUARY 10.

Sanitary Institute (Demonstrations for Sanitary Officers).—Inspection at Friern Barnet Sewage Works. 3 p.m.

British Institute of Certified Carpenters.—Visit to Lambeth Palace. 3 p.m.

Architectural Association of Ireland.—Visit to Eblana Cement Works, Ringsend. 3 p.m.

Dundee Institute of Architecture.—Visit to Villas in West End.

Edinburgh Architectural Association.—Visit to Fire Brigade Buildings and Council Chamber.

MONDAY, FEBRUARY 12.

Royal Academy.—Lectures on Architecture, by Professor Aitchison, R.A.—"Progress in Architecture." IV. 4 p.m.

Surveyors' Institution.—Mr. H. T. Scoble on "The Bacteriological Treatment of Sewage." 8 p.m.

Clerks of Works' Association.—Seventeenth Annual Dinner, King's Hall, Holborn Restaurant. 6.30 p.m.

Sanitary Institute (Lectures for Sanitary Officers).—Dr. Louis Parkes on "Public Health Statutes: Orders, Memoranda, and Model By-laws of the Local Government Board, and Model By-laws in Force in the Administrative County of London." 8 p.m.

Society of Arts (Cantor Lectures).—Mr. Bennett H. Brough on "The Nature and Yield of Metalliferous Deposits." IV. 8 p.m.

Bristol Society of Architects.—Mr. G. H. Oatley on "Bills of Extras." 8 p.m.

TUESDAY, FEBRUARY 13.

Institution of Civil Engineers.—Papers to be further discussed: (1) "Moving Loads on Railway Under-bridges," by Mr. W. B. Farr. (2) "Note on the Floor System of Girder Bridges," by Mr. C. F. Findlay. 8 p.m.

Sheffield Society of Architects and Surveyors.—Mr. C. Hodgson Fowler, F.S.A., on "A Parish Church."

Architectural Association of Ireland.—Fourth Annual Dinner, Royal Hibernian Hotel. 7 p.m.

WEDNESDAY, FEBRUARY 14.

Society of Arts.—Professor R. W. Wood on "The Diffraction Process of Colour Photography." 8 p.m.

The Institute of Sanitary Engineers (Incorporated).—Mr. E. Durant Cecil on "The Geological Interest of a Sewer Cutting." 7 p.m.

Sanitary Institute (Lectures and Demonstrations for Sanitary Officers).—(1) Inspection in the Parish of St. George's, Hanover-square. 2 p.m. (2) Dr. J. F. J. Sykes on "Objects and Methods of Inspection, Nuisances, &c." 8 p.m.

Edinburgh Architectural Society.—Mr. Harold Tarbolton on "Plaster Work." 8 p.m.

Northern Architectural Association.—Mr. Frank Caws on "Concrete Floors." 7.30 p.m.

THURSDAY, FEBRUARY 15.

Royal Academy.—Lectures on Architecture, by Professor Aitchison, R.A., "Progress in Architecture." V. 4 p.m.

Carpenters' Hall, London Wall (Free Lectures on Matters Connected with Building).—Mr. H. C. Richards, M.P., on "Old London." 8 p.m.

Sanitary Institute.—Demonstration, for Sanitary Officers, of book-keeping as carried out in a Sanitary Inspector's office, by Mr. A. Taylor. 7 p.m.

FRIDAY, FEBRUARY 16.

Architectural Association (Discussion Section).—Mr. W. A. Forsyth on "Some Aspects of Modern Architecture." 7 p.m.

Institution of Civil Engineers.—Students' visit to the Great Northern Railway, King's Cross and Hornsey Widening. 2 p.m.

Leeds and Yorkshire Architectural Society.—Mr. Geo. Walton on "Interior Decoration." 6.30 p.m.

Sanitary Institute (Lectures for Sanitary Officers).—Professor A. Bostock Hill on "Trade Nuisances." 8 p.m.

SOME RECENT SALES OF PROPERTY

ESTATE EXCHANGE REPORT.

January 24.—By BROWETT & TAYLOR.

Caledonian-rd.—7 and 8, Story-st., u.t. 44¾ yrs., g.r. 10*l.*, r. 97*l.* 2*s.*	£540
97, 105, 107, 109, 111, and 129, Bemerton-st., u.t. 44¾ yrs., g.r. 36*l.*, r. 237*l.* 12*s.*	1,429
Holloway.—29, Rhodes-st., u.t. 58½ yrs., g.r. 4*l.* 4*s.*, r. 20*l.* 8*s.*	234
44, Vorley-rd., u.t. 47½ yrs., g.r. 6*l.*, r. 30*l.*	238
31 to 37 (odd) and 41, Vorley-rd., u.t. 47½ yrs., g.r. 31*l.* 10*s.*	1,480
20 to 26 (even), Brunswick-rd., u.t. 44¾ yrs., g.r. 23*l.* 10*s.*	935

By HAROLD GRIFFIN.

Wandsworth.—12, Southfields-rd., f., e.r. 28*l.*	465
Battersea.—86 and 88, Gwynne-rd., u.t. 69 yrs., g.r. 10*l.*	500
429, Battersea Park-rd., u.t. 65 yrs., g.r. 7*l.*, r. 45*l.*	365
9, 10, 11, and 12, St. George's-st., u.t. 63 yrs., g.r. 28*l.*	998

By ROBINS, GORE, & MERCER.

Burwash, Sussex.—Dudwell Mill Farm, 55 a. 0 r. 30 p., f. and c.	3,110
Tottenham Court-rd.—2, Gresse-st., u.t. 10¾ yrs., g.r. 55*l.*	£105
23 and 32, Gresse-st., u.t. 12¾ yrs., g.r. 93*l.*	380
17, Stephen-st., u.t. 12½ yrs., g.r. 40*l.*	150
26, Goodge-st., u.t. 13¾ yrs., g.r. 80*l.*, r. 195*l.*	265
Surbiton Hill, Surrey.—Victoria-rd., Rosebank, u.t. 42½ yrs., g.r. 15*l.*, r. 42*l.* 10*s.*	310
Walthamstow.—1 to 6, Cambrian-cottages, f.	1,035

January 25.—By NEWBON, EDWARDS, & SHEPHARD.

St. Luke's.—9 and 10, James-st., u.t. 33 yrs., g.r. 70*l.*	400
St. Pancras.—60, Oakley-sq., u.t. 53 yrs., g.r. 20*l.*, e.r. 70*l.*	520
Barnsbury.—130, Hemingford-rd., u.t. 43 yrs., g.r. 2*l.*, r. 50*l.*	565
Holloway.—92, Landseer-rd., u.t. 250 yrs., g.r. 3*l.* 2*s.*	230
Stoke Newington.—38, Newington Green-rd., f., r. 50*l.*	880
Islington.—197, Essex-rd., u.t. 18½ yrs., g.r. 2*l.* 2*s.*, r. 60*l.*	310
Tottenham.—728, High-rd., f., r. 18*l.*	400

By STIMSON & SONS.

Buckhurst Hill.—Queen's-rd., The Elms, f., r. 70*l.*	1,100
Pimlico.—45, 53, 62, 71, 76, and 84, Claverton-st., u.t. 33½ yrs., g.r. 60*l.*, r. 408*l.*	3,220
Brixton.—12, Grove-rd., u.t. 25½ yrs., g.r. 8*l.* 10*s.*, e.r. 50*l.*	405
Caledonian-rd., 92, Copenhagen-st., u.t. 44 yrs., g.r. 12*l.*, r. 40*l.*	290
2, Matilda-street, u.t. 44 yrs., g.r. 1*l.* 3*s.*, r. 32*l.*	380
New Kent-road.—27A, Adam-st., with stabling, f., r. 85 *l.*	1,500
Brockley.—17, Breakspeare-rd., u.t. 83½ yrs., g.r. 15*l.*, e.r. 90*l.*	850
Peckham.—8 and 9, McKerrell-rd., u.t. 66 yrs., g.r. 10*l.*	570

By SHEPHERD & CATTELL.

Camberwell.—210 and 212, Albany-rd., u.t. 54 yrs., g.r. 20*l.*, r. 80*l.*	710

By VENTOM, BULL, & COOPER.

Islington.—North-rd., &c., area 79,372 ft., a building lease for 80 yrs., let at per annum	760

January 26.—By C. H. BROWN.

Westminster.—33, Willow-st., and 7, 8, and 9, Willow-pl., u.t. 22 yrs., g.r. 15*l.*	190

By C. RAWLEY CROSS & CO.

West Kensington.—11, Anley-road, f., r. 30*l.*	510
Shepherd's Bush.—10, 12, and 14, Sterne-st., f., r. 90*l.*	1,425

By R. PRICE & SON.

Kennington.—15, Renfrew-rd., u.t. 27½ yrs., g.r. 4*l.*, e.r. 36*l.*	305
Battersea.—46, 48, and 50, Freke-rd., u.t. 74½ yrs., g.r. 15*l.*, r. 92*l.*	885

January 29.—By CASTIGLIONE & GIBBINGS (at Carlisle).

Hayton, Cumberland.—A Freehold Farm comprising 32 a. 3r. 18 p.	1,700

January 30.—By FIELD & SONS.

North Woolwich, Essex.—9, Bernard-ter., u.t. 89 yrs., g.r. 6*l.*, r. 52*l.*	305
Dagenham, Essex.—5, 7, and 9, Vicarage-rd. (unfinished), u.t. 91 yrs., g.r., 17*l.* 10*s.*	160
Old Ford.—70 and 72, Parnell-rd., f., r. 78*l.*	870

By FURBER, PRICE & FURBER.

St John's Wood.—2, Upper Hamilton-ter., u.t. 39 yrs., g.r. 5*l.*	1,900
Alexandra-rd., l.g.r. 74*l.*, u.t. 58 yrs., g.r. nil	1,580

By WYER, ADAMS, & GLOVER (at Masons' Hall Tavern).

Wandsworth.—Acre-st., "The British Lion" p.-h., u.t. 15 yrs., g.r. 80*l.*, with goodwill	2,210

By GRAVES & SON (at Paddington).

Bayswater.—15, Kildare-ter., u.t. 51 yrs., g.r. 5*l.*, e.r. 80*l.*	650
46, Talbot-rd., u.t. 59 yrs., g.r. 11*l.*, e.r. 75*l.*	455

January 31.—By LEOPOLD FARMER.

Hampstead.—32, West End-lane, u.t. 50 yrs., g.r. 10*l.*, e.r. 65*l.*	600
135 and 137, Goldhurst-ter., u.t. 78 yrs., g.r. 20*l.*, e.r. 120*l.*	1,150

By W. MARTIN & CO.

Dulwich.—45 and 47, Rodwell-rd., u.t. 77½ yrs., g.r. 12*l.*	465

By MOSS & JAMESON.

Barnes.—22, Woodlands rd., f., e.r. 100*l.*	1,550
Old Bond-st.—No. 38, a profit rental of 50*l.* for 5 yrs.	195

By R. TIDEY & SON.

Stratford.—9, Ravenstone-rd., u.t. 78¼ yrs., g.r. 5*l.* 10*s.*	285

By J. J. HILL & WEAVER (at Horseshoe Hotel).

City of London.—Moor-lane, "The Whittington" p.-h., u.t. 56 yrs., r. 250*l.*, with goodwill	8,810

February 1.—By A. ALDRIDGE & CO.

Clapham.—78, 80, and 84, Mysore-rd., u.t. 93½ yrs., g.r. 25*l.* 10*s.*, r. 120*l.*	1,210

By T. W. CARPENTER.

Belgravia.—17, Wilton-st., u.t. 24 yrs., g.r. 5*l.*, r. 160*l.*	1 900

By GLASIER & SONS.

Ramsgate, Kent.—Ann's-rd., &c., 27 plots of building land, f.	1,500

By NOTT & CARTWRIGHT.

Pimlico.—45, Hugh-st., u.t. 27 yrs., g.r. 8*l.*, r. 60*l.*	470
Brompton.—17, Montpelier-pl., u.t. 27½ yrs., g.r. 6*l.* 6*s.*, r. 45*l.*	360

February 2.—By WESTON & SONS.

Brixton.—18 to 24 (even), Ashmere Grove, u.t. 85 yrs., g.r. 32*l.*, r. 148*l.*	1,420
12 to 20 (even), Cambria-rd., u.t. 42 yrs., g.r. 17*l.* 10*s.*	900
22 to 30 (even), Cambria-rd., u.t. 66½ yrs., g.r. 26*l.* 5*s.*	1,020
Clapham.—21, Berber-rd., u.t. 52 yrs., g.r. 6*l.* 10*s.*, r. 29*l.*	290
Plumstead, Kent.—149, 151, and 153, Herbert-rd., f.	960

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; e.r. for estimated rental; u.t. for unexpired term; p.a. for per annum: yrs. for years; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; yd. for yard.

PRICES CURRENT OF MATERIALS:

WOOD.*

Per Petersburg standard hundred.

	£ s. d.	£ s. d.
White Sea: first yellow deals	18 0 0	23 10 0
Second do.	16 0 0	18 0 0
Third do.	13 10 0	15 0 0
Battens, 40s., 30s., and 15s. less respectively.		
Petersburg: first yellow deals	15 0 0	17 10 0
Second do.	12 10 0	13 10 0
Battens, 30s. and 20s. less respectively.		
Petersburg, white deals	11 10 0	14 0 0
Do. white battens	9 10 0	11 0 0
Riga, white deals	9 10 0	10 10 0
Swedish mixed yellow deals	16 0 0	21 0 0
Third do.	14 0 0	17 0 0
Fourth do.	12 10 0	13 10 0
Fifth do.	11 10 0	12 10 0
Battens, 30s., 20s., and 10s. less respectively.		
Whitewood, 10 to 20 per cent. less.		
Finnish unsorted yellow deals	11 0 0	11 10 0
Battens, 10s. and 5s. less respectively.		
Whitewood, 5 to 10 per cent. less.		
Norwegian second yellow battens	8 0 0	8 10 0
Third do.	7 15 0	8 0 0
Fourth do.	7 10 0	7 15 0
Whitewood, 10s. less.		
Danzig, Crown Deck deals, per 40 ft. 3 in.	0 15 0	1 5 0
Brack	0 12 0	1 0 0
St. Lawrence Pine deals, &c., per P.S.H.:—		
1st, Bright and Dry, regular sizes	20 0 0	27 0 0
" " oddments	13 0 0	21 0 0
2nd " regular sizes	15 0 0	17 10 0
" " oddments	10 0 0	14 0 0
3rd " regular sizes	9 10 0	11 0 0
" " oddments	8 0 0	9 10 0
4th " regular sizes	8 10 0	9 10 0
" " oddments	7 10 0	9 0 0
St. Lawrence Spruce deals, &c.		
First, regular sizes	10 0 0	12 10 0
Second "	9 15 0	10 5 0
Third "	9 5 0	9 15 0
Fourth "	8 15 0	9 5 0
Oddments and battens at 20s., 10s., 7s. 6d., and 5s. less respectively.		
New Brunswick Spruce deals, &c.	9 0 0	10 0 0
Oddments, battens, and fourths	8 15 0	9 5 0
United States pitch pine planks and boards	10 10 0	15 0 0
Prepared Boards, per square		
1¼ by 6½ and 7 in. 1st yellow	11 0	16 0
" " and "	10 6	12 6
1 by 6½ and 7 in. 1st "	10 0	11 6
" " " white	8 6	9 6
" " and yellow	8 6	10 6
" " " white	7 6	8 6
¾ by 6½ & 7 in. 1st & 2nd yellow	7 9	9 6
" " " white	7 6	8 6
¾ by 6½ and 7 in. 1st yellow and white (grooved, tongued, and beaded)	8 6	9 6
¾ by 6½ and 7 in. 2nd yellow and white (ditto)	7 6	8 6
½ by 6½ and 7 in. 1st yellow and white (ditto)	6 6	7 6
½ by 6½ and 7 in. 2nd yellow and white (ditto)	6 0	7 0
Narrower widths at 10 per cent. less. 3rd quality at 15 per cent. less than 2nd.		
Danzig and Memel Fir Timber— per load		
Best middling	3 15 0	4 0 0
Good middling and Second	3 5 0	3 10 0
Common middling	3 0 0	3 5 0
Undersized	3 0 0	3 5 0
Swedish and Norwegian Balks	2 10 0	2 15 0
Baltic Oak Timber—		
Danzig and Stettin—Large	3 10 0	4 15 0
Small	2 10 0	3 10 0
Quebec Timber per load		
Yellow Pine	5 0 0	6 10 0
Oak	4 15 0	6 15 0
Elm	4 5 0	4 10 0
Ash	3 10 0	4 5 0
Birch	3 7 6	5 15 0
New Brunswick, &c., Birch	3 2 6	3 12 6
American Pitch Pine Timber	3 17 6	4 10 0
Wainscot, per log, 18 cubic ft.—		
Crown (Eng. & Dutch) } nominal	3 10 0	4 12 6
Brack } nominal	2 15 0	3 15 0
Lathwood, per cubic fathom—		
Petersburg	4 0 0	6 10 0
Riga and Danzig	4 10 0	5 10 0
Norway Poles, per ft. run	0 0 1	0 0 1½
Oak Staves, per mille full size pipe		
Memel, Crown	220 0 0	230 0 0
Brack	190 0 0	200 0 0
Danzig	165 0 0	175 0 0
Bosnia, single Barrel (nominal)	28 0 0	30 0 0
United States, Pipe	37 10 0	45 0 0
Hogshead, extra heavy and double extra	32 0 0	35 0 0
Indian Teake per load	11 0 0	16 10 0
British Guiana Greenheart	0 0 0	8 0 0
Mahogany, per foot superficial—		
Honduras, cargo average	0 0 4½	0 0 5½
Nicaragua, do.	0 0 4½	0 0 5½
Tabasco, do.	0 0 4½	0 0 6½
Mexican, do.	0 0 4	0 0 4½
Panama, do.	0 0 3½	0 0 4
African, do.	0 0 3½	0 0 5
Cuba, do.	0 0 6	0 0 8
St. Domingo, do.	0 0 5	0 0 7½
Do. Curls (good to prime)	0 0 9	0 1 3
Walnut, American (logs)	0 2 6	0 5 0
Do. do. (planks and boards)	0 2 0	0 7 6
Italian, per foot superficial	0 0 3	0 0 7½
Black Sea, per ton	6 0 0	12 0 0

* The prices named are for the wood as imported and landed in the docks. Ten per cent., approximately, should be added in order to arrive at the current trade prices.

COMPETITIONS, CONTRACTS, AND PUBLIC APPOINTMENTS.

(For some Contracts, &c., still open, but not included in this List, see previous issues.)

COMPETITIONS.

Nature of Work.	By whom Advertised.	Premiums.	Designs to be delivered
*Laying out Park and Playground	Rawtenstall Corporation	50*l.*; 30*l.*; 20*l.*	Mar. 30
*Accident and General Hospital	Cameron Hospital Committee	100*l.*; 50*l.*	April 11

CONTRACTS.

Nature of Work or Materials.	By whom Required.	Forms of Tender, &c., Supplied by	Tenders to be delivered
Steel Girders (350 tons)	Great Western Railway Company	G. K. Mills, Paddington Station, W.	Feb. 13
Kerbing and Flags (10,000 yards)	Bury (Lancs.) Corporation	A. W. Bradley, Civil Engineer, Town Hall	do.
Setts (15,000 tons)	do.	do.	do.
Stables, Ice Room, &c., Batley	Faversham Gas Company	B. Watson, Architect, Bradford-road, Batley	do.
Telescope Gasholder	Belfast Corporation	H. E. Jones, Gas Works, Stepney, E.	do.
Asylum Boundary Wall, &c., Falls-road	Preston (Lancs.) Corporation	City Surveyor, Town Hall	do.
Verandahs at Public Hall	Bromley U.D.C.	Borough Surveyor, Town Hall	do.
*Kerbing and Channelling	Hampstead Vestry	Surveyor, Council Offices, Bromley, Kent	do.
*Works and Materials	Hammersmith Vestry	C. H. Lowe, Vestry Hall, Hampstead	Feb. 14
*Works and Materials		See Advertisement	do.
Factor's House, Dunsinnan, N.B.	Gloucester Corporation	W. Reid, Factor, Dunsinnan	do.
Two Shops and Offices, Southgate-street	Stockport Corporation	A. J. Dunn, Architect, 31, St. Michael's-square, Gloucester	do.
Paving Works, &c.	Battersea Vestry	J. Atkinson, C.E., Central Buildings, St. Peter's Gate, Stockport	do.
*Works, Materials, Services	Hampstead Vestry	J. T. Pilditch, Municipal Buildings, Lavender Hill, S.W.	do.
*Works at Public Baths	Bethnal Green Vestry	Vestry Hall, Hampstead	Feb. 15
*Lamp Columns, Manhole Covers, & Inspection Covers	Brighton County Council	F. W. Barratt, Vestry Hall, Church Row, Bethnal Green	do.
*Granite Kerb and Pitchers	Messrs. D. Williams & Co.	F. J. C. May, Town Hall, Brighton	do.
Re-building Temple Bar Inn, High-street, Merthyr		G. Kenshole, Architect, Duffryn House, Ystrad Mynach	do.
Alterations, &c., Ely Lodge House, Enniskillen	York Guardians	Thos. Elliott, Architect, 37, Darling-street, Enniskillen	do.
Dining Hall		Penty & Penty, Architects, Lendal Chambers, York	do.
Church Alterations, Alfreton, Derby	Barnoldswick Co-op. Indus. Soc.	C. H. Fowler, Architect, Durham	Feb. 16
Bakery, &c.		G. Bower, Architect, 60, Market-street, Colne	do.
Chapel, School, &c., Hingham, Norfolk	Bermondsey Vestry	Rev. S. Willetts, Rockland St. Peter, Attleborough	do.
*Encaustic Tiling	St. Pancras Vestry	R. J. Angel, Town Hall, Spa-road, S.E.	Feb. 19
*Works and Materials		W. Nisbet Blair, Vestry Hall, Pancras-road, N.W.	do.
Church, School &c., Kidderminster		D. C. Baxter, 104, Lea-street, Kidderminster	do.
Church, Burnthead, Larbert	Churwell (Yorks.) Indus. Co-op. Soc.	J. P. Goodsir, Architect, Newmarket-street, Falkirk	do.
Two Houses and Shop	Goole U.D.C.	W. Cheesebrough, Post Office, Churwell	do.
Well Sinking, Pollington	Egham School Board	J. C. Mellis, C.E., 364, Gresham House, Old Broad-street, E.C.	do.
*Alterations and Additions to Schools at Staines	Beckenham U.D.C.	J. A. Engall, Clarence-street, Staines	do.
*Trial Bore Holes	Tottenham U.D.C.	J. A. Angell, Council Offices, Beckenham	do.
*Making-up Roads	Lancs. & Yorks. Railway Co.	P. E. Murphy, 712, High-road, Tottenham	Feb. 20
Stable Coach House, &c., Bank Top, Burnley	Tottenham U.D.C.	R. C. Irwin, Hunt's Bank, Manchester	do.
*Works and Materials	do.	Council Offices, 712, High-road, Tottenham	do.
*Brick Sewer	Lambeth Guardians	P. E. Murphy, 712, High-road, Tottenham	do.
*Wood-Shed and Store	Lanchester Joint Hospital Board	Guardian Offices, Brooke-street, Kennington-road, S.E.	Feb. 21
Additions to Hospital, Langley Park	Enfield U.D.C.	J. E. Parkes, Architect, Post Office Chambers, Newcastle	do.
*Removal, &c., of Iron Hospital	Harrow Land Company, Limited	Surveyor, Court House, Enfield	do.
*New Road with Sewers	St. Marylebone Vestry	Surveyor, Company's Offices, Hindes-road, Harrow	do.
Wood Blocks	Islington Vestry	Court House, Marylebone-lane	Feb. 22
*Works and Materials	Leeds Corporation	Vestry Hall, Upper-street, N.	do.
Police Buildings and Fire Station, East-street		City Engineer, Municipal Buildings	do.
Alterations, &c., to Inn, Great James-st. Londonderry	Wood Green U.D.C.	J. P. M'Grath, Architect, 28, Carlisle-road, Londonderry	do.
*Making-up Roads		C. J. Gunyon, Town Hall, Wood Green	Feb. 23
Seventeen Cottages, Langley Park, near Durham	Roscommon R.D.C.	C. E. Oliver, Architect, Blackhill, co. Durham	do.
Pumping Station, Reservoir, &c.	Manchester Corporation	J. O'Keeffe, Council Offices	Feb. 24
*Steel and Ironwork	Kingston Guardians	J. M. M'Elroy, Town Hall, Manchester	do.
*Steam Heating (Additions) and Iron Staircase	Southwark Board of Works	W. H. Hope, Union Offices, Kingston-on-Thames	Feb. 26
*Wood Paving	West Ham County Council	Board of Works Offices, Vine-street, Tooley-street, S.E.	do.
*Making-up Roads	Cuckfield R.D.C.	J. G. Morley, Town Hall, West Ham, E.	Feb. 27
Pump House, &c., Balcombe	Fulham Vestry	J. Mansergh, Engineer, 5, Victoria-street, S.W.	Feb. 28
*Taking-down and Re-erection of Bandstand	Essex County Council	Surveyor, Town Hall, Walham Green	do.
*Taking-down and Rebuilding Bridge, Rochford	Bradford Corporation	Chief Surveyor, County Offices, Chelmsford	do.
Memorial Hall		City Surveyor, Town Hall, Bradford	Mar. 1
National Schools, Ballystrang, co. Donegal	Wolverhampton Corporation	E. M'Fadden, Letterkenny	do.
House, Office, Repository, &c	Dartford School Board	J. W. Bradley, Civil Engineer, Town Hall	Mar. 3
*School and Caretaker's Residence	Metropolitan Asylums Board	H. Hall, Architect, 19, Doughty-st., Mecklenburgh-square, W.C.	Mar. 13
*Hospital, Joyce Green, near Dartford	Wallasey U.D.C.	A. & C. Harston, 15, Leadenhall-street, E.C.	Mar. 14
Boring at Pumping Station, Liscard	Hardwick Colliery Company	J. H. Crowther, Engineer, Great Float, near Birkenhead	Mar. 15
Forty-nine Cottages, Heath, near Chesterfield	Ebbw Vale (Mon.) Steel, Iron, &c. Co.	W. M. Ashmoor, Architect, New Queen-street, Chesterfield	No date
Foundry, Two Kilns, &c	West Cheshire Water Company	Engineer, Company's Offices, Ebbw Vale	do.
Engine House, &c., Hooton	Mr. M. Turley	W. M. Jones, 9, Hamilton-square, Birkenhead	do.
Shops and Stabling, Chichester-street, &c., Belfast	Messrs. Nuthall & Sons, Ltd.	W. J. Moore, Architect, Ann-street, Belfast	do.
Landing Stage, &c., Kingston-on-Thames		Carter & Ashworth, Architects, 86, Eden-st., Kingston-on-Thames	do.
Wesleyan Church, Schools, &c., Cheshunt	Messrs. E. Townsend & Co.	J. Wills, Architect, Victoria Chambers, Derby	do.
Rebuilding Warehouse, Bradford-road, Dewsbury	Messrs. J. Tetley & Son, Limited	F. W. Ridgway, Architect, Dewsbury	do.
Alterations, Crown Inn, Leeds-road, Dewsbury	Mr. McWilson	do.	do.
Twenty-two Houses, Mickletown Methley, Yorks.	Hon. H. E. Butler	Garside & Pennington, Architects, Pontefract	do.
Six Almshouses, Nidd, Yorks.		F. H Hargrave, Architect, Ripon	do.
Iron Cottage		Mr. Harvey, Southington House, Overton, Hants.	do.
Pair Houses, Wetherby, Yorks.	Golf Club	Bland & Bown, Architects, Harrogate	do.
Road, Totteridge	Mr. E. Barnsbee	Tuckett & Son, Surveyor, 2, Basinghall-street, E.C.	do.
Three Shops, Tong-road, New Wartley, Leeds		J. McFawcett & Son, Architects, Basinghall Chambers, Leeds	do.

PUBLIC APPOINTMENTS.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
*Clerk of Works	Fulham Guardians	3*l.* 3s. per week	Feb. 12
*Clerk of Works	London County Council	3*l.* 13s. 6d. per week	Feb. 19
*Teacher of Drawing, Colombo	Colonial Office	Rs. 4,200 per annum	Feb. 28
*Clerk of Works	London County Council	3*l.* 13s. 6d. per week	No date

PRICES CURRENT—*continued*.

	£	s.	d.	£	s.	d.
Stain Walnut (logs) per foot cube..	0	1	0	0	1	6
" (planks and boards)	0	1	9	0	3	0
Sequoia (Californian redwood), per foot cube	0	1	9	0	2	0
Whitewood, American (logs)	0	1	4	0	1	9
" " (planks and boards)..	0	1	9	0	2	9
Quartered oak " " " ..	0	2	3	0	4	0
Kauri pine (logs)	0	1	9	0	2	0
" " (planks)	0	2	3	0	2	9
Jarrah (planks)	0	2	0	0	2	3
Lancewood spars each, fresh and large	0	5	0	0	7	6
Lancewood spars, ordinary to fair..	0	3	0	0	4	0
Degame spars	0	8	0	0	10	0

METALS.

Iron—Pig, in Scotland ..... ton	3	8	7½	0	0	0
Bar, Welsh, in London	9	0	0	9	15	0
Do. do. at works in Wales.....	8	10	0	9	0	0
Do. Staffordshire, in London....	9	15	0	11	15	0
Copper—British cake and ingot ..	77	0	0	77	10	0
Best selected	78	0	0	79	0	0
Sheets, strong.....	83	0	0	84	0	0
Chili bars.....	73	0	0	0	0	0
YELLOW METAL .....lb.	6½d.			7d.		
LEAD—Pig						
Spanish .....ton	16	15	0	0	0	0
English Com. Brands	17	0	0	0	0	0
Sheet, English, 6 lbs. per sq. ft. and upwards	18	0	0	0	0	0
Pipe	18	10	0	0	0	0
ZINC—English sheet .....ton	26	0	0	0	0	0
Vieille Montagne	27	10	0	0	0	0
Spelter	22	12	6	22	15	0
TIN—Straits	131	0	0	0	0	0
Australian	131	5	0	131	15	0
English Ingots	135	0	0	136	0	0
Banca	0	0	0	0	0	0
Billiton	0	0	0	0	0	0

OILS.

Linseed .....ton	23	15	0	0	0	0
Cocoanut, Cochin	29	15	0	0	0	0
Do. Ceylon	26	15	0	0	0	0
Palm, Lagos	27	10	0	0	0	0
Rapeseed, English, pale	27	0	0	0	0	0
Do. Brown	25	10	0	0	0	0
Cottonseed ref.	19	10	0	20	0	0
Olein	17	5	0	19	5	0
Lubricating U.S.	0	8	0	0	0	0
Do. Black	0	7	6	0	0	0
Tar—Stockholm.....barrel	1	6	6	0	0	0
Archangel.....	1	0	0	0	0	0
Turpentine	39	15	0	0	0	0

BRICKS, &c.

	s.	d.	
Hard Stocks	36	6	per thousand alongside, in river.
Rough Stocks...	32	6	" " " "
Grizzles.....	32	6	" " " "
Smooth Bright Facing Stocks .	62	0	" " " "
Shippers	45	6	" " " "
Fletton	31	6	" at railway depôt.
Red Wire Cuts ..	34	0	" " " "
Best Fareham Red	71	6	" " " "
Best Blue Pressed Staffordshire ..	86	0	" " "
Best Stourbridge Fire Bricks	84	0	" " " "
Best White Glazed Bricks, Headers and Stretchers	240	0	" " " "
Quoins and Bullnose	340	0	" " " "
Double Headers	320	0	" " " "
Best Dipped Salt Glazed—Quoins and Bullnose ..	260	0	" " " "
Headers and Stretchers	220	0	" " " "
Double Headers	260	0	" " " "
Seconds Quality White and Salt Glazed.....	40	0	per thousand less than best.

	s.	d.	
Thames and Pit Sand	7	0	per yard, delivered.
Thames Ballast	6	0	" "
Best Heavy Portland Cement..	36	0	per ton "
Best Ground Blue Lias Lime..	23	0	" "

NOTE.—The cement and lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 12s. 6d. per yard, delivered.

STONE.

	s.	d.		
Ancaster in blocks	2	0	per ft. cube, deld. rly. depôt	
Beer "	1	7	"	"
Grinshill "	1	10	"	"
Red Corsehill in blocks	2	5	"	"
Red Mansfield "	2	4½	"	"
Hard York "	2	10	"	"
" " 6 in. sawn both sides landings, to sizes (under 40 ft. sup.)	2	7	per ft. super. at rly. depôt.	
" " 6 in. Rubbed "	2	10½	"	"
" " 3 in. sawn, both sides slabs (random sizes)	1	3	"	"
" " 3 in. self-faced "	0	8½	"	"

TILES.

	s.	d.	
Best plain red roofing tiles..	40	6	per 1,000 at rly. depôt.
hip and valley tiles....	3	6	per doz. " "
Best Broseley tiles	40	6	per 1,000 " "
hip and valley tiles....	3	8	per doz. " "

SLATES.

in. in.	£	s.	d.	
20 x 10 best blue Bangor..	11	5	0	per 1000 of 1200 at ry. dep
16 x 8 " ..	6	2	6	" "
20 x 10 best blue Portmadoc	10	18	0	" "
16 x 8 " "	6	0	0	" "
20 x 10 best unfading green	11	0	0	" "
16 x 8 " "	6	12	0	" "

TO CORRESPONDENTS.

"Enquirer" (The prices are at mills. The present price of sheet lead delivered to works within the ordinary London delivery radius is £18 5s. per ton).—M. & F. (Amounts should have been stated). F. W. F. (Too late; next week).

NOTE.—The responsibility of signed articles, letters, and papers read at meetings, rests, of course, with the authors.

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Letters or communications (beyond mere news items) which have been duplicated for other journals are NOT DESIRED.

We are compelled to decline pointing out books and giving addresses.

Any commission to a contributor to write an article is given subject to the approval of the article, when written, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

All communications regarding literary and artistic matters should be addressed to THE EDITOR; those relating to advertisements and other exclusively business matters should be addressed to THE PUBLISHER, and *not* to the Editor.

TENDERS.

[Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 10 a.m. on Thursdays*. N.B.—We cannot publish Tenders unless authenticated either by the architect or the building-owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is given, nor any list in which the lowest Tender is under £100, unless in some exceptional cases and for special reasons.]

BECKENHAM.—For making-up Phœnix-road, Penge, for the Urban District Council. Mr. J. A. Angell, Surveyor, Council Offices, Beckenham :—

George Wilson.....	£375	Mowlem & Co., Westminster, S.W.‡	£310
H. F. White.....	350		
C. Pearce	327		

‡ Recommended for acceptance.

BRADFORD.—For forming and sewering three new streets, &c., Sticker-lane, Laisterdyke, for Mr. E. Hine. Mr. W. J. Beall, surveyor, 23, Bank-street, Bradford :—

Walter Burrand	£3,200	Ross, Wilks, & Crabtree, Shipley*	£2,890
Naylor & Son	2,985	Matthew Hall.....	2,533

BRAMBRIDGE (Hants).—For the reconstruction of two bridges for the Hursley Rural District Council. Messrs. Lemon & Blizard, engineers, Lansdowne House, Castle-lane, Southampton :—

Stevens & Co.	£850	Osman, F.....	£724
Mussellwhite & Son ..	847	Jewell & Co., Winchester*...	668
Cawte, H.....	793		
Playfair & Toole.....	764		

BRIGHTLINGSEA.—For water-supply works, for the Urban District Council :—

Contract 4.—Building.

T. J. Ward	£1,599	H. V. Lord	£1,460
Dupont & Co.	1,549	Everitt & Son	1,445
W. Chambers	1,549	W. Manders, Leyton*	1,154

Contract 5.—Cast Iron Tank.

Mayoh & Haley	£930	Steavenson & Son	£614
Ashton & Green	850	W. Manders, Leyton*	608
Bird & Co.	794	Barrow Iron Works ..	575

Contract 6.—Special Main.

Warner & Co., Walton-on-Naze* £1,472

BRIGHTON.—For the construction of an underground convenience, Queen's-road, for the Corporation. Mr. F. J. C. May, C.E., Town-hall, Brighton :—

Finch & Co.....	£1,827	Field & Co., 20, Preston-st., Brighton*.....	£1,664
H. J. Penfold	1,800		
Sattin & Evershed ..	1,790		

CHESHUNT.—For the erection of shop and cottage, Flamstead End, for Messrs. McMullen & Sons, Limited, the Hertford Brewery. Mr. James Farley, architect, Hertford :—

Hobbs & Son £1,445	0	Lawrence & Son ..	£975 0
Matthews & Son	1,199	5	W. Barrett.....	913 0

GARLINGE (Kent).—For the execution of sewerage works for the Isle of Thanet Rural District Council. Mr. Albert Latham, C.E., Municipal Buildings, Margate :—

Cooke & Co.....	£3,680	Tuff & Miskin, Rochester*	£2,288

HIGHAM'S PARK.—For additions to Villette, Oak Hill (viz., billiard-room, stable, coach-house, and conservatory), for Mr. J. R. Carter. Mr. Geo. B. Jerram, C.E., architect :—

Snewin Bros. & Co.	£1,187 00	T. Baker	£925 0 9
		W. Holdsworth	924 15 0

HORSHAM.—For the supply of road metal, for the County Council. Mr. W. B. Purser, C.E., 31, Bedford-road, Horsham :—

Road Maintenance and Stone Supply Company, Gravesend—12s. to 13s. 6d. per ton.

C. M. Manuelle, London—12s. to 13s. 3d. per ton.

Cherbourg Quartzite Company, London—12s. to 13s. 6d. per ton.

G. Brotherwood, Tonbridge—10s. to 11s. per yard.

L. Summerfield, London—10s. 8d. per ton.

These are all accepted to various stations and wharves. Sixteen firms tendered.

LEYTON.—For the erection of one shop, one stable, and one house in Capworth-street and Dunton-road, Leyton, for Mr. L. C. Walden. Mr. Geo. B. Jerram, C.E., architect :—

W. Davenport....£1,246	0	E. Jenner	£950 0
E. C. Lee.....	992	0	W. Holdsworth....	907 15
T. & W. Baker ..	985	0	W. Collings	850 0

LLANDAFF.—For widening Fairwater and Pwllmelyn-roads for the Rural District Council. Mr. Jas. Holden, surveyor, 35, St. Mary-street, Cardiff.

E. Osmond £774	9 10	F. Ashley, Cardiff*	£651 1 6
Jno. Rees.....	693	15 4	

LONDON.—For the execution of foundations, roadways, and main drainage at new infirmary, Acton-lane, for the Willesdem Guardians. Mr. A. Saxon Snell, architect, 22, Southampton Buildings, Chancery-lane, E.C. Quantities by Messrs. Northcroft, Son, & Neighbour :—

Grounds & Newton ..£10,372	2 10	Clift Ford.... £5,867	0 0
J. Macklin .. 9,910	0 0	Wilkinson Bros. 6,800	0 0
J. & T. Binns 8,595	4 3	Spencer Santo & Co..... 6,850	0 0
Pedrette & Co. 8,400	0 0	Patman & Fotheringham 6,661	0 0
Nowell & Co. 8,170	0 0	Boyer & Sons 6,498	0 0
Neave & Son 7,995	0 0	Cowley & Drake, Willesden Green*.. 6,100	0 0
R. Ballard, Ltd. 7,676	0 0		
W. Walker.... 7,175	0 0		
Wall & Co. .. 6,920	0 0		

LONDON.—For additions to the First Avenue Hotel, Holborn, W.C., for the Gordon Hotels, Limited. Mr. Lewis H. Isaacs and Mr. Henry L. Florence, architects, 3, Verulam-buildings, Gray's Inn. Quantities by Mr. James Francis Bull, 30, Bedford-row, W.C. :—

Staines & Sons	£28,340	Colls & Sons	£26,823
Ashby & Horner ..	28,111	Cubitt & Co.	26,763
Langdale, Hallett, & Co.	27,620		

LONDON.—For sanitary work at Bishopsgate Fire Station, for the London County Council :—

F. & F. J. Wood ..	£384 0	Staines & Son	£288 0
Vigor & Co.	311 10	Smith & Sons	277 0
Jarvis & Sons	288 0	Outhwaite & Son*.	269 0

LONDON.—For alterations and additions to "The Duke of Cambridge," South Tottenham, N. Mr. Herbert Riches, architect, 3, Crooked-lane, King William-street, E.C. Quantities supplied :—

P. Hart.....	£3,445	A. Porter	£3,327
Antill & Co.....	3,385	Knight & Son	3,315
Courtney & Fairbairn	3,343	Sheffield Bros.*	3,149

LONDON.—For the erection of public baths and washhouses, facing Prince of Wales-road, Kentish Town, N.W., for the St. Pancras Vestry. Messrs. T. W. Aldwinckle & Son, architects, 1, Victoria-street, S.W. Quantities by Mr. W. T. Farthing, 46, Strand, W.C. :—

C. Gray Hill £80,495		Shillitoe & Son £73,000	
Leslie & Co.	76,522	B. E. Nightingale..	71,473
Patman & Fotheringham.....	76,511	Spencer, Santo, & Co.	69,900
F. & H. F. Higgs..	74,900	H. Wall & Co.	69,500
Foster & Dicksee ..	73,880	C. Wall, Chelsea, S.W.*	68,943
Balaam Bros.	73,150		

LUTON.—For the erection of warehouse, Peel-street, for Mr. Bartlett. Mr. A. Wilkinson, architect :—

Saunders & Son	£1,625	G. Batson	£1,504
G. Kingham	1,596	G. Angel*	1,170
D. Parkins	1,511	[All of Luton.]	

PENRHIWCEIBER (Wales).—For additions to Workmen's Institute. Messrs. Morgan and Elford, architects, 1, Jeffrey-street, Mountain Ash.

Miles Edmunds £870		J. D. Wilkins £795	
Jenkins & Sons*, Porth.....	845		

RAMSGATE.—For the execution of wood-paving works for the Corporation. Mr. T. G. Taylor, Borough Surveyor, Broad-street, Ramsgate :—

	Per superficial yard.					
	High-street.		York-street.		Addington-street.	
	s.	d.	s.	d.	s.	d.
Wm. Griffiths	6	6	12	6	16	0
Acme Wood Flooring Co., Ltd.	6	0	12	0	14	6
Improved Wood Pavement Co., Ltd.*	6	0	11	6	14	0

ROCHDALE.—For levelling, paving, &c., Moore-street (continuation), for the Ecclesiastical Commissioners for England. Messrs. McCall & Robinson, Fleece-street, Rochdale :—

Thomas Rowland.....	£793 5 3
Turner, Heason, & Mitchell	699 10 0
Kershaw & Son	685 19 6
John Moore	678 6 8
Ashworth & Sons, Norden, Rochdale*	619 14 10

ROEHAMPTON.—For erecting a detached house on the Spencer Lodge Estate, Roehampton, for Mr. A. M. Robertson, M.D. Mr. T. M. Garrood, architect, 172, Fenchurch-street, E.C. :—

Spencer, Santo, & Co.£4,185		H. Roffey.....	£2,695
Ayres & Co.	2,700	E. Tribe*	2,109

STRATFORD-ON-AVON.—For the erection of stores, Henley-street, for the General Supply Stores Company. Mr. F. P. Trepess, architect, Warwick. Quantities by architect :—

Callaway Bros. £1,450	0 0	E. Kennard ..	£1,348 0 0
G. Whateley.. 1,430	0 0	Fincker & Co., Stratford-on-Avon*.....	1,348 0 0
E. Talliss 1,434	2 6		
J. Harris 1,368	0 0		

[*See also next page.*

WEDNESBURY.—For making-up, &c., a street at King's Hill, for the Town Council. Mr. E. Martin-Scott, Borough Engineer, Town Hall, Wednesbury. Quantities by the Borough Engineer:—

Fitzmaurice & Co.	£685 8 1	Currall, Lewis, & Martin	£386 16 2
John Mackay	500 0 0	F. J. Smith	368 0 0
James Atkins	473 2 11	J. W. Fereday, Wednesbury*	339 9 9
Jacob Biggs	450 0 0		
George Law	398 2 7		

LONDON SCHOOL BOARD TENDERS.

At the last meeting of the London School Board, the Works Committee submitted the following list of tenders. Mr. T. J. Bailey is the Board's Architect:—

HACKFORD-ROAD SCHOOL AND STOCKWELL P.T. CENTRE.—Providing and fixing a sliding partition in boys' department. Partitioning off a portion of chemical laboratory for a physical laboratory, and fitting the benches in physical laboratory with rails, and providing covers to sinks; altering position of fume closet, and providing slate shelf for balances, &c.; providing a stock cupboard in disused cloak-room, and hooks for holding maps:—

H. & G. Mallett	£160 0	Rice & Son	£148 0
Peacock Bros.	159 19	E. Triggs*	138 0
Maxwell Bros., Ltd.	155 0		

Repairs to Buildings on the Schedule of Prices.

HACKNEY (Group 1):—

Unsigned	+ 35 per cent. on schedule.
J. Haydon	+ 30 " " "
Barrett & Power*	+ 27½ " " "

HUGH MYDDELTON.—Fitting up disused manual training room as a physical laboratory and science demonstration room. Providing and fixing two partitions in girls' department:—

T. L. Green	£635 0 0	Johnson & Co.	£495 0 0
London School Furniture Co.	527 4 6	Williams & Son	426 0 0
Marchant & Hirst	525 0 0	General Builders, Limited*	306 0 0

HYDE PARK.—Providing and erecting shed in Hyde Park for the Board's gardener:—

Mitson & Co.	£112 16	Hawkins & Co.*	£72 0
J. & W. T. Hunter	112 0		

LEO-STREET.—Adapting two houses adjoining school site for schoolkeeper's residence and housewifery centre in connexion with new school:—

H. Line + 10 per cent. on schedule		Rice & Son	£595
W. Hammond	£776	J. Marsland	585
B. E. Nightingale	655	Maxwell Bros., Ltd.	573
		J. C. Chalkley*	475

MAGDALEN-ROAD.—Removing three iron buildings and appurtenances from the Acorn-street site and re-erecting them on this site:—

T. Cruwys	£1,450	Mitson & Co.	£1,139
J. & W. T. Hunter	1,285	Hawkins & Co.	1,130
Humphreys, Ltd.	1,193	W. Harbrow*	1,087

OXFORD-GARDENS.—Enlargement, &c.:—

B. E. Nightingale	£14,525 0 0	Martin, Wells, & Co.	£12,205 0 0
Leslie & Co., Ltd.	14,283 10 11	Stimpson & Co.	12,153 0 0
Johnson & Co., Ltd.	12,799 0 0	Edwards & Medway*	11,778 0 0

PLASSY-ROAD.—Domestic economy school; manual training centre, &c.:—

Kirk & Randall	£6,895	A White & Co.	£5,710
J. Longley & Co.	6,731	J. & M. Patrick	5,702
H. Wall & Co.	6,659	Holliday & Greenwood	5,696
F. & H. F. Higgs	6,643	W. J. Mitchell & Sons	5,696
W. Downs	6,570	J. & C. Bowyer	5,493
B. E. Nightingale	6,459	J. Marsland	5,485
E. Lawrance & Sons	5,991	E. Triggs	5,424
E. P. Bulled & Co.	5,947	Edwards & Medway*	5,400
W. Johnson & Co., Limited	5,807		

PLUMSTEAD-ROAD.—Replacing present waste-pipes from sinks in students' benches with new trough wastes, and open channel pipes in floor; also replacing circular sinks with oblong ditto: new slate shelves for balances and distilling apparatus, &c.; providing and fixing two partitions in mixed department:—

Gibb & Co.	£409	E. Proctor	£360
Thomas & Edge	397	G. Barker	350
J. H. Hodgin	389	T. H. Jackson	302
C. Foreman	373	G. Bush*	245
London School Furniture Company	370		

PRINCESS MAY-ROAD.—Providing and fixing complete low-pressure hot-water apparatus to three halls, also to six class-rooms on each floor, drawing class-room, cloak-rooms, corridors, and lavatories:—

Wontner Smith, Gray, & Co.	£725 0	Oldroyd & Co., Ld.	£695 0
Wippell Bros. & Row	720 0	J. & F. May	665 0
J. Grundy	698 10	G. Davis	656 0
		Cannon & Sons*	650 0

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